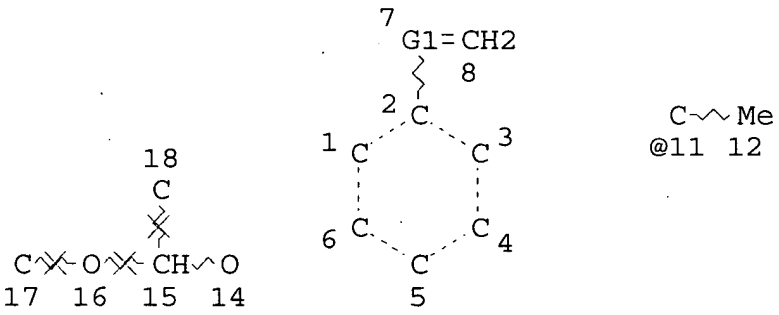
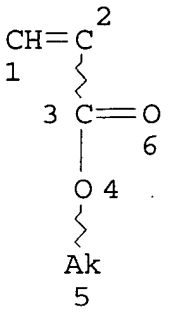
```
=> file reg
FILE 'REGISTRY' ENTERED AT 14:09:15 ON 20 AUG 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 American Chemical Society (ACS)


=> display history full l1-


     FILE 'LREGISTRY' ENTERED AT 12:11:11 ON 20 AUG 2003
L1                STR
L2                STR
L3                STR
L4                STR

     FILE 'REGISTRY' ENTERED AT 12:39:22 ON 20 AUG 2003
L5                SCR 2043
L6              4 SEA SSS SAM L1 AND (L3 OR L4 OR L2) AND L5
L7            573 SEA SSS FUL L1 AND (L3 OR L4 OR L2) AND L5
                  SAV L7 LEE121/A

     FILE 'HCA' ENTERED AT 12:45:28 ON 20 AUG 2003
L8            374 SEA L7
L9          15240 SEA DEBLOCK? OR UNBLOCK?
L10        546174 SEA HYDROLY?
L11             3 SEA L8 AND L9
L12            50 SEA L8 AND L10
L13         24984 SEA ACID?(2A)(LABIL? OR LABLE? OR FRAGMENT? OR CLEAV? OR
                  SPLIT? OR DISPROPORTION? OR DISINTEGRA? OR DETERIORAT?)
L14             3 SEA L12 AND  L13

     FILE 'REGISTRY' ENTERED AT 12:59:29 ON 20 AUG 2003
L15               SCR 1056 AND 1700
L16             2 SEA SUB=L7 SSS SAM L1 AND (L3 OR L4) AND L2 AND L5 AND
                  L15
L17             2 SEA SUB=L7 SSS FUL L1 AND (L3 OR L4) AND L2 AND L5 AND
                  L15
                  SAV L17 LEE121A/A

     FILE 'HCA' ENTERED AT 13:03:35 ON 20 AUG 2003
L18             2 SEA L17
L19        173029 SEA ACID?(2A)(CAT# OR CATALY? OR HYDROLY?)
L20             6 SEA L12 AND L19
L21           172 SEA L7/P
L22            34 SEA L21 AND L10
L23         26957 SEA DEPROTECT?
L24            13 SEA L23 AND L8
L25         39568 SEA (ANION? OR LIVING#)(2A)(POLYM? OR COPOLYM? OR
                  TERPOLYM? OR HOMOPOLYM? OR RESIN?)
L26        141004 SEA RESIST OR RESISTS OR PHOTORESIST? OR MASK? OR
                  PHOTOMASK?
```

```
L27           13 SEA L8 AND L25
L28          205 SEA L8 AND L26
L29           19 SEA (L11 OR L14 OR L18 OR L20 OR L24 OR L27) AND L26
L30           21 SEA L22 AND L26

     FILE 'REGISTRY' ENTERED AT 13:55:12 ON 20 AUG 2003
L31              STR L4
L32              STR
L33            2 SEA SUB=L7 SSS SAM L1 AND L2 AND L31 AND L32 AND L5 AND
                 L15
L34            2 SEA SUB=L7 SSS FUL L1 AND L2 AND L31 AND L32 AND L5 AND
                 L15

     FILE 'HCA' ENTERED AT 14:01:08 ON 20 AUG 2003
L35            2 SEA L34
L36           13 SEA L11 OR L14 OR L18 OR L20 OR L35
L37           20 SEA (L24 OR L27 OR L29) NOT L36
L38           15 SEA L30 NOT (L36 OR L37)


     FILE 'REGISTRY' ENTERED AT 14:09:15 ON 20 AUG 2003


=> d l17 que stat
L1               STR
```



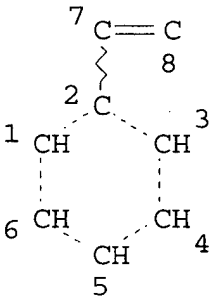

```
VAR G1=CH/11
NODE ATTRIBUTES:
CONNECT IS E2  RC AT  14
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  15

STEREO ATTRIBUTES: NONE
L2               STR
```



NODE ATTRIBUTES:
CONNECT IS E1 RC AT 5
DEFAULT MLEVEL IS ATOM
GGCAT IS BRA SAT AT 5
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M4-X20 C AT 5

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 6

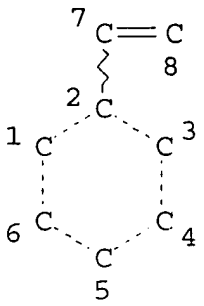
STEREO ATTRIBUTES: NONE
L3 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE
L4 STR



G1 9 Ak @12 O~Ak
@14 15

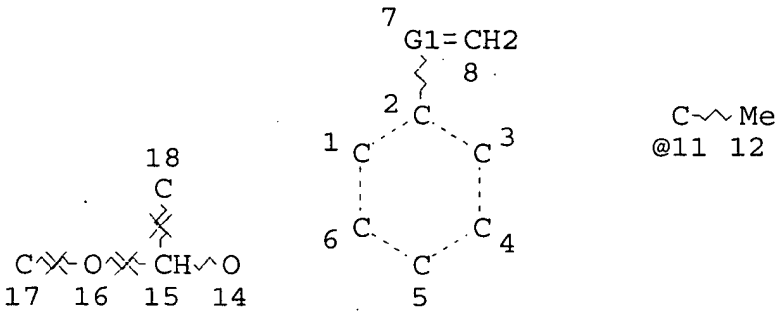
VAR G1=OH/12/14/X
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 12
CONNECT IS E2 RC AT 14
CONNECT IS X2 RC AT 15
DEFAULT MLEVEL IS ATOM
GGCAT IS SAT AT 12
GGCAT IS SAT AT 15
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1-X10 C AT 12
ECOUNT IS M1-X10 C AT 15

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
L5 SCR 2043
L7 573 SEA FILE=REGISTRY SSS FUL L1 AND (L3 OR L4 OR L2) AND L5
L15 SCR 1056 AND 1700
L17 2 SEA FILE=REGISTRY SUB=L7 SSS FUL L1 AND (L3 OR L4) AND
L2 AND L5 AND L15

100.0% PROCESSED 19 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

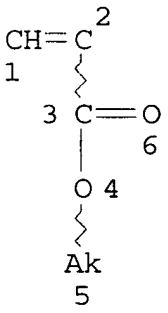
=> d l34 que stat
L1 STR



VAR G1=CH/11
NODE ATTRIBUTES:
CONNECT IS E2 RC AT 14
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 15

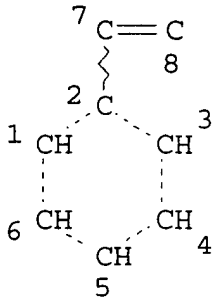
STEREO ATTRIBUTES: NONE
L2 STR



NODE ATTRIBUTES:
CONNECT IS E1 RC AT 5
DEFAULT MLEVEL IS ATOM
GGCAT IS BRA SAT AT 5
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M4-X20 C AT 5

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 6

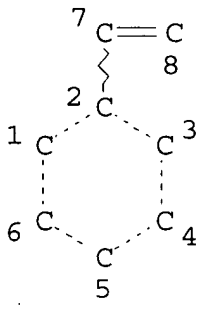
STEREO ATTRIBUTES: NONE
L3 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE
L4 STR



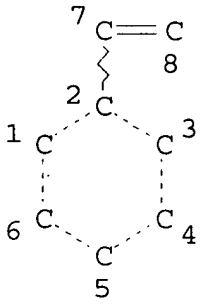
G1 9 Ak @12 O~Ak
@14 15

VAR G1=OH/12/14/X
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 12
CONNECT IS E2 RC AT 14
CONNECT IS X2 RC AT 15
DEFAULT MLEVEL IS ATOM
GGCAT IS SAT AT 12
GGCAT IS SAT AT 15
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1-X10 C AT 12

ECOUNT IS M1-X10 C AT 15

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
L5 SCR 2043
L7 573 SEA FILE=REGISTRY SSS FUL L1 AND (L3 OR L4 OR L2) AND L5
L15 SCR 1056 AND 1700
L31 STR

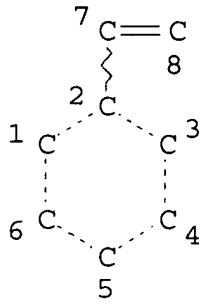


G1 9 Ak @12 O~Ak
@14 15

VAR G1=12/14/X
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 12
CONNECT IS E2 RC AT 14
CONNECT IS X2 RC AT 15
DEFAULT MLEVEL IS ATOM
GGCAT IS SAT AT 12
GGCAT IS SAT AT 15
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1-X10 C AT 12
ECOUNT IS M1-X10 C AT 15

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
L32 STR



HO 11

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L34 2 SEA FILE=REGISTRY SUB=L7 SSS FUL L1 AND L2 AND L31 AND L32 AND L5 AND L15

100.0% PROCESSED 19 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

=> file hca
FILE 'HCA' ENTERED AT 14:10:45 ON 20 AUG 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

=> d l36 1-13 cbib abs hitstr hitind

L36 ANSWER 1 OF 13 HCA COPYRIGHT 2003 ACS on STN
138:273081 Carboxyl-blocked polyfumarates, their preparation, their coatings, and their uses as electronic encapsulants. Okuo, Masaki; Sonoda, Kensaku; Sato, Hiroshi (NOF Corporation, Japan). Jpn. Kokai Tokkyo Koho JP 2003096137 A2 20030403, 23 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-292850 20010926.

AB Fumarate diesters CH:(CO2X1)CHCO2X2 (X1, X2 = C3-8 alkyl, C4-8 cycloalkyl) are radically polymd. with (M1) CH:(CO2A1)CHCO2A2 [A1, A2 = same definition as X1 and X2, where one or both of them are CR1(CHR2R3)Y1R4 (R1-R3 = H, C1-18 org. group; R4 = C1-18 org. group; Y1 = O, S) or Q (R5, R6 = H, C1-18 org. group; R7, R8 = bivalent C1-18 org. group; Y2 = O, S)], (M2) CH2:C(CH2CO2B1)(CO2B2) [B1, B2 = C3-8 alkyl, C4-8 cycloalkyl, where one or both of them are Q

(aforesaid)], and/or (M3) CH2:CEDnCO2Z1 [Z1 = Q (aforesaid); D= benzyl; n = 0, 1; E = H, Me] to form the title mentioned polyfumarates satisfying Mn 1000-300,000 and acid value, when the carboxyl groups are **unblocked**, 50-250 mg-KOH/g. Also claimed are coatings contg. (A) the polyfumarates, (B) their latent crosslinking agents, (C) latent acid catalysts, and (D) self-crosslinkable polymers which have M2 (aforesaid)-derived units and substituted ethylene units contg. carboxyl-reactive functional groups, preferably in wt. ratio of A/B/C/D 100:(5-2000):(0.01-15):(5-500). Cured films of the coatings, satisfying Knoop hardness 8-12, are further claimed. Thus, a clear coating contg. 100 parts dicyclohexyl fumarate-di-sec-Bu fumarate-bis(2-isobutyloxyethyl) fumarate copolymer (acid value of **unblocked** form 51 mg-KOH/g, Mw 35,000) and 15.5 parts Denacol EX 421 (epoxy resin) was applied on a pretreated steel sheet and baked at 140.degree. to give a specimen showing excellent resistance to impact, acid, and accelerated weathering test and Knoop microhardness 10.2.

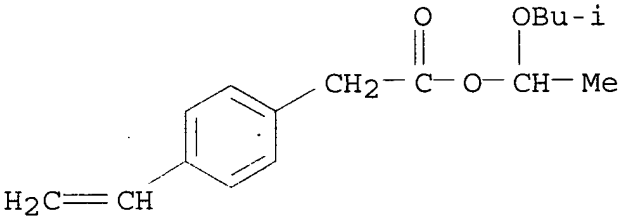
IT **503269-43-0P**
(storage-stable coatings of polyfumarates having latent carboxyl groups suited for electronic encapsulants)

RN 503269-43-0 HCA

CN 2-Butenedioic acid (2E)-, dicyclohexyl ester, polymer with ethenylbenzene and 1-(2-methylpropoxy)ethyl 4-ethenylbenzeneacetate (9CI) (CA INDEX NAME)

CM 1

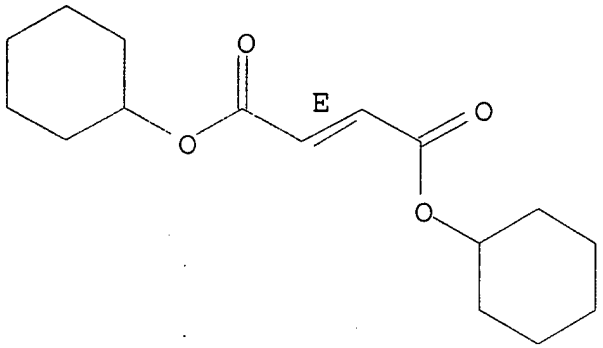
CRN 503269-42-9
CMF C16 H22 O3



CM 2

CRN 47092-64-8
CMF C16 H24 O4

Double bond geometry as shown.



CM 3

CRN 100-42-5
CMF C8 H8

H_2C═CH— Ph

IC ICM C08F222-14
ICS C08G085-00; H01L023-29; H01L023-31
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 37, 38, 76
IT 503269-33-8P 503269-35-0P 503269-37-2P 503269-39-4P
503269-41-8P **503269-43-0P** 503269-44-1P
(storage-stable coatings of polyfumarates having latent carboxyl groups suited for electronic encapsulants)

L36 ANSWER 2 OF 13 HCA COPYRIGHT 2003 ACS on STN
138:18052 Alkenylphenol-based copolymers bearing acid-sensitive segments and selectively protected hydroxy-containing segments for chemically amplified resists and their preparation. Nobuhara, Yukikazu; Kobayashi, Asami (Nippon Soda Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002348328 A2 20021204, 16 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-154614 20010523.
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The copolymers involve mer units represented by CH2CR1[C6H4OCR2R3(OR4)] [I; R1 = H, Me; R2 = H, C1-3 alkyl; R3 = H, C1-6 alkyl, C1-6 alkoxy; R4 = open-chain or branched chain-contg. C1-20 alkyl, C5-10 cycloalkyl, (substituted) C6-20 aryl; R2 and R3, or R2 and R4 may form ring together], CH2CR5(C6H4OR6) (II; R5 = H, Me; R6 = acetal or ketal structure-free group which is dissocd. or

decompd. in acidic condition), and III (l, m, n = 1, 2; R7 = H, Me; R8 = H, open-chain or branched chain-contg. C1-4 alkyl; R21-R30 = H, C1-15 hydrocarbyl which may contain hetero atom, C1-15 hydrocarbylene which may contain hetero atom. or hetero atom. which may be bonded to each other and form ring; R8, R21 and R22, R23-R26, or R27 and R28 when n = 2, adjacent C may be directly bonded to each other and may form double bond). III may be adamantyl (meth)acrylate-derived units. The copolymers are prepd. by anionic polymn. of styrene derivs. giving mer units I, compds. giving mer units II, and compds. giving mer units III. The copolymers are treated with weak acids, preferably aq. H2SO4, for selective removal of protection groups for acetal structures and to give copolymers bearing OH-contg. segments, acetal structure-contg. segments, and acrylic deriv. segments bearing acid-sensitive esters.

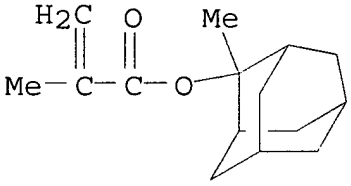
IT **477205-37-1P**, p-tert-Butoxystyrene-p-(1-ethoxyethoxy)styrene-2-methyladamantyl methacrylate copolymer
(alkenylphenol-based copolymers prepd. by anionic polymn. and their acid treatment for selective deprotection for chem. amplified resists)

RN 477205-37-1 HCA

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

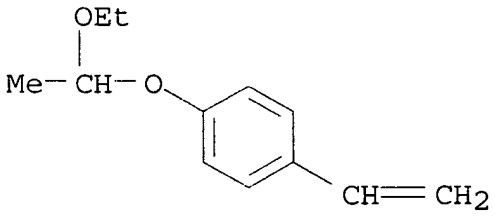
CM 1

CRN 177080-67-0
CMF C15 H22 O2



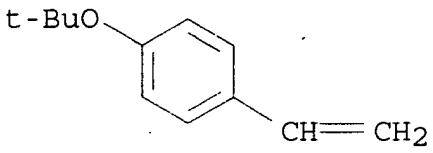
CM 2

CRN 157057-20-0
CMF C12 H16 O2



CM 3

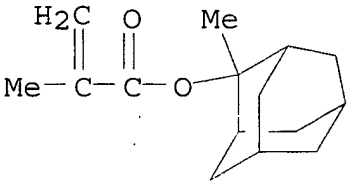
CRN 95418-58-9
CMF C12 H16 O



IT **477205-37-1DP, hydrolyzed**
(alkenylphenol-based copolymers prepd. by anionic polymn. and their acid treatment for selective deprotection for chem. amplified resists)
RN 477205-37-1 HCA
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

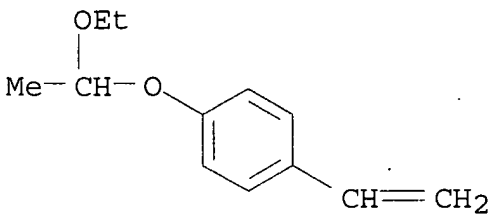
CM 1

CRN 177080-67-0
CMF C15 H22 O2



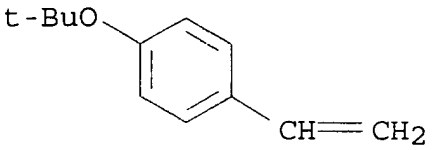
CM 2

CRN 157057-20-0
CMF C12 H16 O2



CM 3

CRN 95418-58-9
CMF C12 H16 O



IC ICM C08F212-14
ICS C08F008-12; C08F220-12; C08F297-02; G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 37, 38
ST chem amplified resist alkenylphenol copolymer; alkenylphenol hydroxystyrene adamantyl methacrylate copolymer resist; acetal alkenylphenol chem amplified resist; anionic polymn alkenylphenol copolymer structure control resist; tertiary butoxystyrene hydroxystyrene methyladamantyl methacrylate copolymer resist; **acid labile** group acetal selective removal resist
IT **477205-37-1P**, p-tert-Butoxystyrene-p-(1-ethoxyethoxy)styrene-2-methyladamantyl methacrylate copolymer
(alkenylphenol-based copolymers prepd. by anionic polymn. and their acid treatment for selective deprotection for chem. amplified resists)
IT **477205-37-1DP**, **hydrolyzed**
(alkenylphenol-based copolymers prepd. by anionic polymn. and their acid treatment for selective deprotection for chem. amplified resists)

L36 ANSWER 3 OF 13 HCA COPYRIGHT 2003 ACS on STN
137:177110 Preparation of polymer, and resist composition using the polymer. Takeda, Takanobu; Watanabe, Osamu (Shin-Etsu Chemical Co., Ltd., Japan). U.S. Pat. Appl. Publ. US 2002111459 A1 20020815, 16 pp. (English). CODEN: USXXCO. APPLICATION: US 2001-3121 20011206. PRIORITY: JP 2000-372408 20001207.
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The present invention relates to the prepn. of polymer comprising recurring units of I (R1,4 = H, methyl; R2,3 = C1-10 alkyl; R2 and R3 may form a ring; R5 = H, hydroxyl, alkyl, alkoxy, halogen; R6,7 = H, Me,alkoxycarbonyl, cyano, halogen; R8 = C4-20 tertiary alkyl; n = 0-4; p = pos. number; q, r = pos. no., 0; exclusive of q=r=0; p1 = pos. no.; p2 = 0, pos. no., and p1+p2=p) by effecting **deblocking** reaction on a polymer comprising recurring units

of II in the presence of an **acid catalyst**. The polymer thus produced has a narrower mol. wt. distribution than polymers produced by the prior art methods. A resist compn. comprising the polymer as a base resin has advantages including a dissoln. contrast of resist film, high resoln., exposure latitude, process flexibility, good pattern profile after exposure, and minimized line edge roughness.

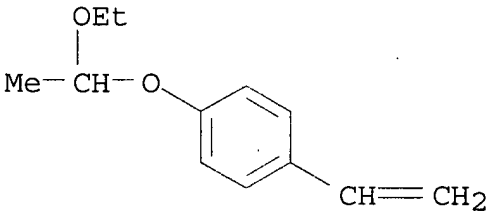
IT **157057-23-3DP, hydrolyzed** or partially **hydrolyzed 446845-72-3DP, hydrolyzed 446845-75-6DP, hydrolyzed 446845-77-8DP, hydrolyzed 446845-79-0DP, hydrolyzed**
(prepn. of polymer and photoresist compn. contg.)

RN 157057-23-3 HCA

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

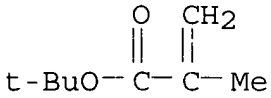
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

CRN 585-07-9
CMF C8 H14 O2

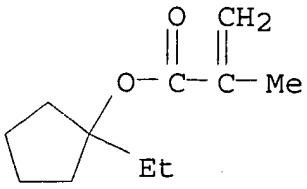


RN 446845-72-3 HCA

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

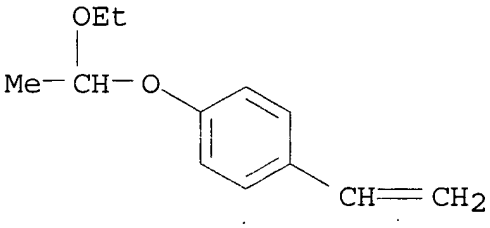
CM 1

CRN 266308-58-1
CMF C11 H18 O2



CM 2

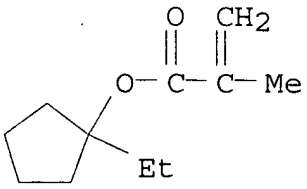
CRN 157057-20-0
CMF C12 H16 O2



RN 446845-75-6 HCA
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with ethenylbenzene and 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

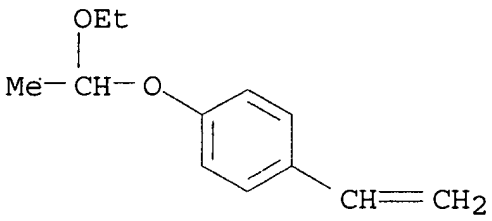
CM 1

CRN 266308-58-1
CMF C11 H18 O2



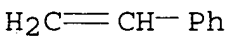
CM 2

CRN 157057-20-0
CMF C12 H16 O2



CM 3

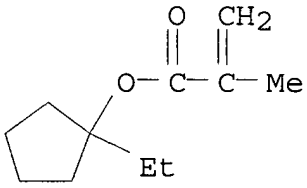
CRN 100-42-5
CMF C8 H8



RN 446845-77-8 HCA
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

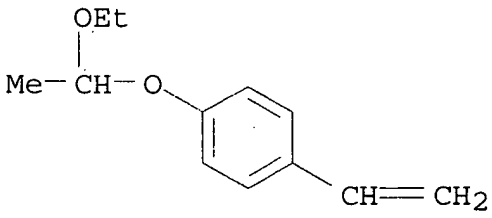
CM 1

CRN 266308-58-1
CMF C11 H18 O2



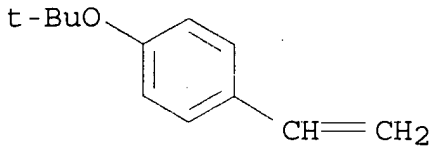
CM 2

CRN 157057-20-0
CMF C12 H16 O2



CM 3

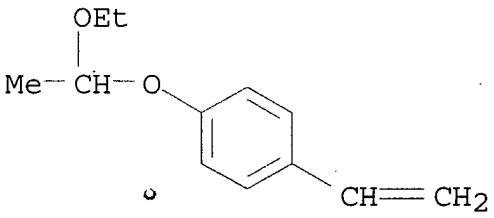
CRN 95418-58-9
CMF C12 H16 O



RN 446845-79-0 HCA
CN Benzene, 1-(1,1-dimethylethoxy)-4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

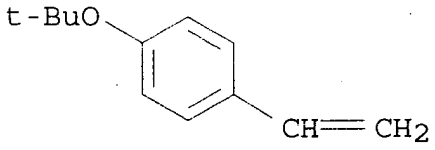
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

CRN 95418-58-9
CMF C12 H16 O



IC ICM G03F007-038
ICS C08F006-06
NCL 528486000
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38
IT **157057-23-3DP, hydrolyzed** or partially **hydrolyzed 446845-72-3DP, hydrolyzed**

446845-75-6DP, hydrolyzed 446845-77-8DP, hydrolyzed 446845-79-0DP, hydrolyzed
(prepn. of polymer and photoresist compn. contg.)

L36 ANSWER 4 OF 13 HCA COPYRIGHT 2003 ACS on STN
136:191686 Electron beam or x-ray resist composition containing sulfonate salt photoacid generator. Kodama, Kunihiko; Aogo, Toshiaki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002049155 A2 20020215, 65 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-233216 20000801.

AB The compn. contains (A) .gtoreq.1 N-hydroxyimide sulfonate esters and .gtoreq.1 onium sulfonate salts selected from sulfonium sulfonates and iodonium sulfonates as acid generators by electron beam or x-ray radiation and (B) base polymers selected from (1) polymers having acid-degradable groups to increase alkali developability for pos. working, (2) low-mol.-wt. dissoln. inhibitors with mol. wt. .ltoreq.3000 having acid-degradable group to increase dissoln. speed in alkali developeres by acids and water-insol. and alkali-developable polymers for pos. working, and (3) water-insol. and alkali-developable polymers and **acid-catalytic** crosslinking agents for neg. working. The compn. shows high sensitivity and gives high-resoln. resist patterns with good post-coating delay (PCD) stability.

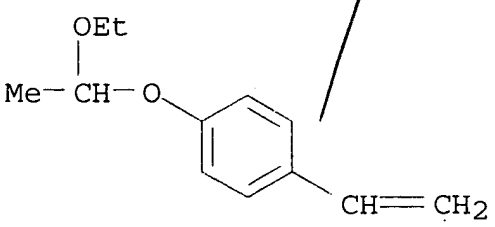
IT **158593-28-3**, p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene copolymer **199432-82-1 279244-35-8 279244-37-0 288620-13-3 288620-15-5 289706-85-0 325143-37-1 359434-80-3 372968-15-5 387382-45-8 387382-49-2 398457-05-1**
(electron beam or x-ray resist compn. contg. sulfonate salt photoacid generator)

RN 158593-28-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

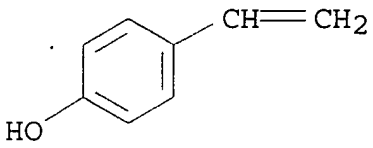
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

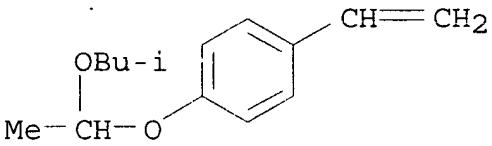
CRN 2628-17-3
CMF C8 H8 O



RN 199432-82-1 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

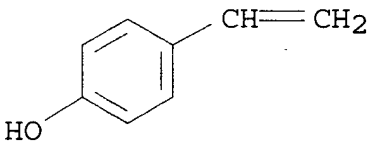
CM 1

CRN 192314-53-7
CMF C14 H20 O2



CM 2

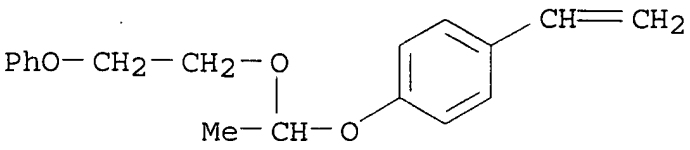
CRN 2628-17-3
CMF C8 H8 O



RN 279244-35-8 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenoxyethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

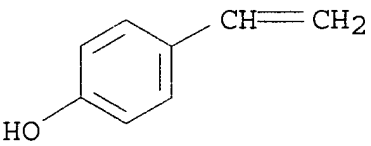
CM 1

CRN 279244-34-7
CMF C18 H20 O3



CM 2

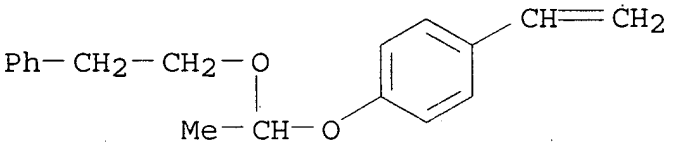
CRN 2628-17-3
CMF C8 H8 O



RN 279244-37-0 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

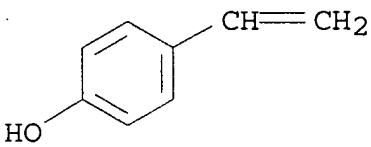
CM 1

CRN 246157-37-9
CMF C18 H20 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O

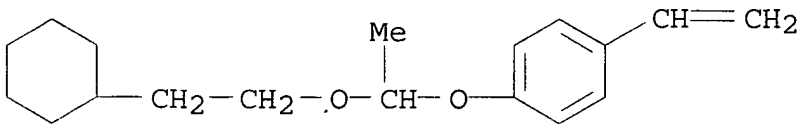


RN 288620-13-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-

ethenylbenzene (9CI) (CA INDEX NAME)

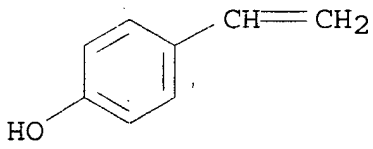
CM 1

CRN 288620-12-2
CMF C18 H26 O2



CM 2

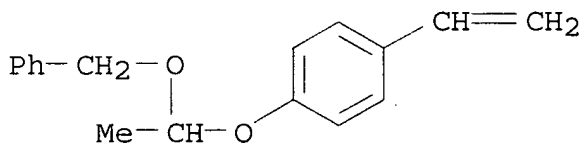
CRN 2628-17-3
CMF C8 H8 O



RN 288620-15-5 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(phenylmethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

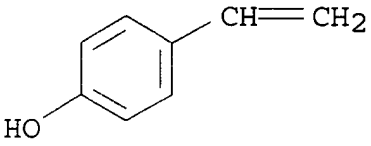
CM 1

CRN 288620-14-4
CMF C17 H18 O2



CM 2

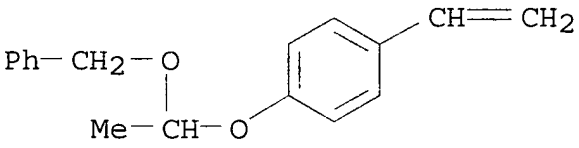
CRN 2628-17-3
CMF C8 H8 O



RN 289706-85-0 HCA
CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate and 1-ethenyl-4-[1-(phenylmethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

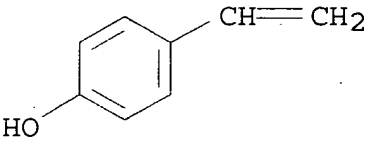
CM 1

CRN 288620-14-4
CMF C17 H18 O2



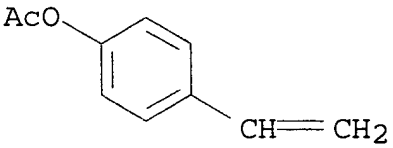
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

CRN 2628-16-2
CMF C10 H10 O2

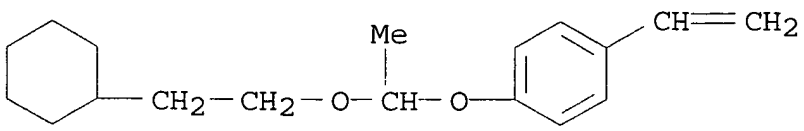


RN 325143-37-1 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-

ethenylbenzene and 1-(1,1-dimethylethyl)-4-ethenylbenzene (9CI) (CA INDEX NAME)

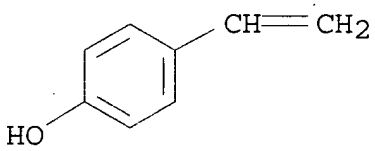
CM 1

CRN 288620-12-2
CMF C18 H26 O2



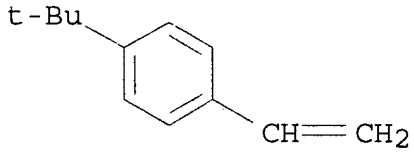
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

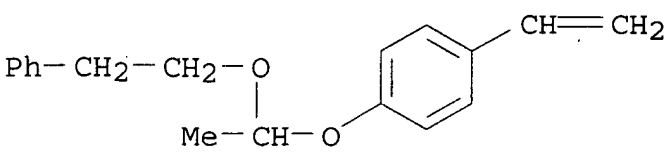
CRN 1746-23-2
CMF C12 H16



RN 359434-80-3 HCA
CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate and 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

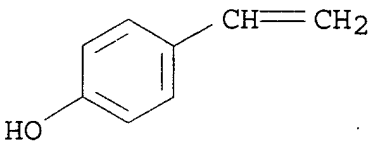
CM 1

CRN 246157-37-9
CMF C18 H20 O2



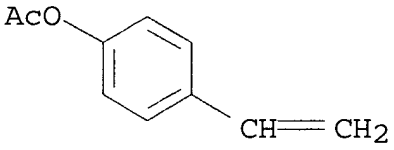
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

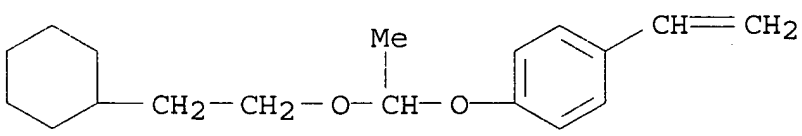
CRN 2628-16-2
CMF C10 H10 O2



RN 372968-15-5 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

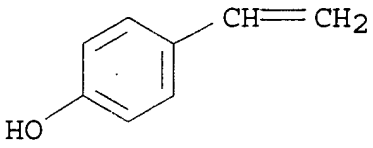
CM 1

CRN 288620-12-2
CMF C18 H26 O2



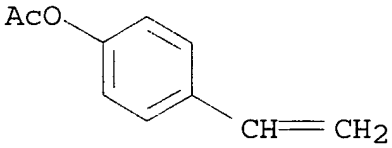
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

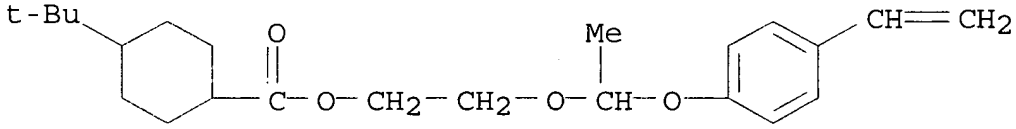
CRN 2628-16-2
CMF C10 H10 O2



RN 387382-45-8 HCA
CN Cyclohexanecarboxylic acid, 4-(1,1-dimethylethyl)-, 2-[1-(4-ethenylphenoxy)ethoxy]ethyl ester, polymer with 4-ethenylphenol and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

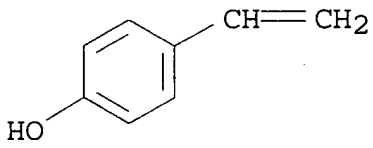
CM 1

CRN 334643-35-5
CMF C23 H34 O4



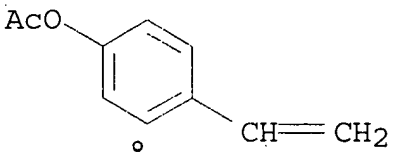
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

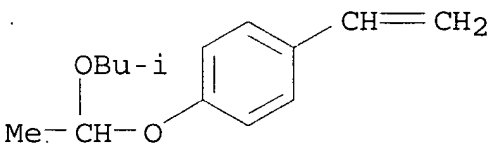
CRN 2628-16-2
CMF C10 H10 O2



RN 387382-49-2 HCA
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

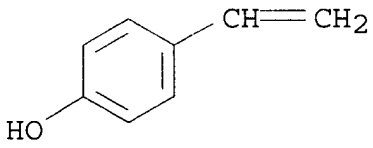
CM 1

CRN 192314-53-7
CMF C14 H20 O2



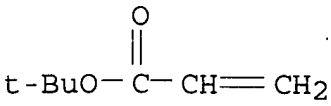
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

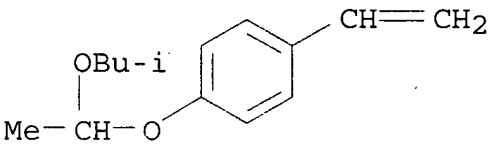
CRN 1663-39-4
CMF C7 H12 O2



RN 398457-05-1 HCA
CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer with 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

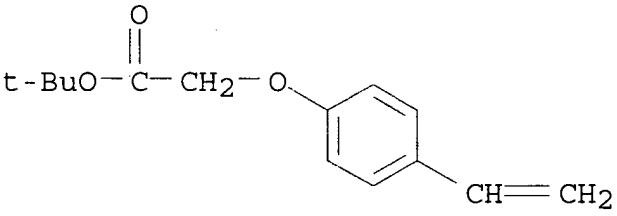
CM 1

CRN 192314-53-7
CMF C14 H20 O2



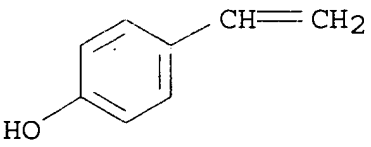
CM 2

CRN 142952-61-2
CMF C14 H18 O3



CM 3

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-039

ICS C08K005-00; C08L101-00; G03F007-004; G03F007-032; G03F007-038; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 24979-70-2DP, VP 8000, reaction products with cyclohexylphenoxyethyl vinyl ether 86830-84-4DP, **hydrolyzed** 95418-59-0DP, p-tert-Butoxystyrene-styrene copolymer, **hydrolyzed** 103983-46-6DP, reaction products with polyhydroxystyrene 110134-35-5P 147625-42-1P 160309-96-6DP, p-Acetoxystyrene-tert-butyl methacrylate copolymer, **hydrolyzed** 185405-11-2P 185405-14-5DP, 4-Hydroxystyrene-5-vinyl-1,3-benzodioxole copolymer, **hydrolyzed** 185405-14-5P, 4-Hydroxystyrene-5-vinyl-1,3-benzodioxole copolymer 212555-24-3DP, 4-Cyclohexylphenoxyethyl vinyl ether, reaction products with polyhydroxystyrene 321164-59-4P 345212-27-3P 349647-01-4P 398457-06-2P 398457-07-3P 398457-08-4P
(electron beam or x-ray resist compn. contg. sulfonate salt photoacid generator)

IT 24979-69-9, Poly(m-hydroxystyrene) 24979-70-2, VP 15000 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 129674-22-2 **158593-28-3**, p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene copolymer 159296-87-4 **199432-82-1** 200808-68-0 **279244-35-8 279244-37-0 288620-13-3 288620-15-5 289706-85-0 325143-37-1 359434-80-3 372968-15-5 387382-45-8 387382-49-2 398457-05-1**
(electron beam or x-ray resist compn. contg. sulfonate salt photoacid generator)

L36 ANSWER 5 OF 13 HCA COPYRIGHT 2003 ACS on STN

135:264558 Chemically amplified positive resist composition and patterning method. Takeda, Takanobu; Watanabe, Jun; Takemura, Katsuya; Koizumi, Kenji (Shin-Etsu Chemical Co., Ltd., Japan). Eur. Pat. Appl. EP 1136885 A1 20010926, 60 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2001-302636 20010321. PRIORITY: JP 2000-79414 20000322.

AB A chem. amplified, pos. resist compn. comprises (1) org. solvent, (2) polymer having acid labile groups, (3) photoacid generator, (4) basic compd., and (5) compd. contg. at least two allyloxy groups of R1R2C=CR3CHR4O (R1,4 = H, C1-12 alkyl; R1 and R3, or R2 and R3 may form a ring) in a mol. The resist compn. has a high sensitivity, resoln., dry etching resistance and process adaptability, and is improved in the slimming of a pattern film after development with an aq. base soln. The resist compn. is also applicable to the thermal flow process suited for forming a microsize contact hole pattern for the fabrication of VLSI.

IT **362479-11-6**
(chem. amplified pos. resist compn. contg.)

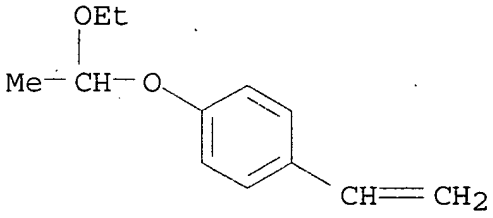
RN 362479-11-6 HCA

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene, 4-ethenylphenol and

3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI)
(CA INDEX NAME)

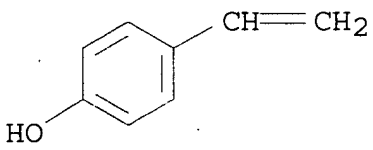
CM 1

CRN 157057-20-0
CMF C12 H16 O2



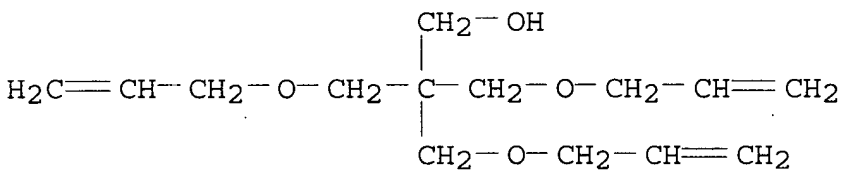
CM 2

CRN 2628-17-3
CMF C8 H8 O



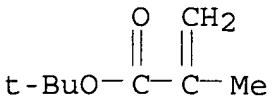
CM 3

CRN 1471-17-6
CMF C14 H24 O4



CM 4

CRN 585-07-9
CMF C8 H14 O2



IC ICM G03F007-004
ICS G03F007-039; G03F007-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 76

IT 3235-51-6, Tris(2-methoxyethyl)amine 24979-70-2D, Poly(p-hydroxystyrene), ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 194996-88-8 326925-52-4 326925-68-2, 1-Ethylcyclopentyl methacrylate-p-hydroxystyrene copolymer 326925-71-7 338438-44-1 338438-45-2 362478-92-0D, ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 362478-93-1D, ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 362478-94-2D, ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 362478-95-3D, ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 362478-97-5D, ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 362478-98-6 362478-99-7 362479-00-3D, ethoxypropyl ether or ethoxyethyl ether 362479-01-4 362479-02-5 362479-03-6 362479-04-7D, ethoxypropyl ether or ethoxyethyl ether 362479-05-8D, ethoxypropyl ether or ethoxyethyl ether 362479-06-9D, ethoxypropyl ether or ethoxyethyl ether 362479-07-0D, ethoxypropyl ether or ethoxyethyl ether 362479-08-1D, ethoxypropyl ether or ethoxyethyl ether 362479-09-2 362479-10-5 **362479-11-6** 362479-12-7 362479-12-7D, ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 362479-14-9 362479-15-0 362479-16-1
(chem. amplified pos. resist compn. contg.)

L36 ANSWER 6 OF 13 HCA COPYRIGHT 2003 ACS on STN
135:127195 Enhanced transport of therapeutic and diagnostic agents using membrane disruptive acid-sensitive polymers. Hoffman, Allan S.; Stayton, Patrick S.; Murthy, Niren (University of Washington, USA). PCT Int. Appl. WO 2001051092 A2 20010719, 50 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US356 20010105. PRIORITY: US 2000-PV174893 20000107.

AB Compns. and methods for transport or release of therapeutic and diagnostic agents, metabolites or other analytes from cells, compartments within cells, or through cell layers or barriers are described. The compns. include a membrane barrier transport enhancing agent and are usually administered in combination with an enhancer and/or exposure to stimuli to effect disruption or altered permeability, transport or release. In a preferred embodiment, the compns. include compds. which disrupt endosomal membranes in response to the low pH in the endosomes but which are relatively inactive toward cell membranes (at physiol. pH, but can become active toward cell membranes if the environment is acidified below pH 6.8), coupled directly or indirectly to a therapeutic or diagnostic agent. Other disruptive agents can also be used, responsive to stimuli and/or enhancers other than pH, such as light, elec. stimuli, electromagnetic stimuli, ultrasound, temp., or combinations thereof. The compds. can be coupled by ionic, covalent or H bonds to an agent to be delivered or to a ligand which forms a complex with the agent to be delivered. Agents to be delivered can be therapeutic and/or diagnostic agents. Treatments which enhance delivery such as ultrasound, iontophoresis, and/or electrophoresis can also be used with the disrupting agents. For example, a terpolymer of dimethylaminoethyl methacrylate, Bu methacrylate, and styrene benzaldehyde was prepd. for the membrane-disruptive backbone which was then PEGylated with thiol-terminated monofunctional or heterofunctional PEGs. The acid-degradable linkage was a p-aminobenzaldehyde acetal.

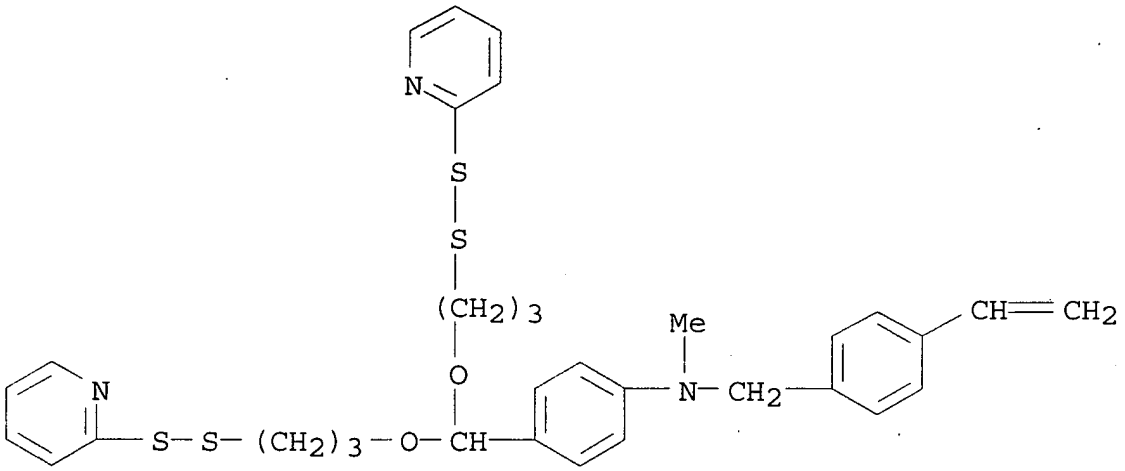
IT **282732-40-5DP**, reaction products with methoxy-PEG-thiol derivs. of fluorescein/hexalysine/lactose
(enhanced transport of therapeutic and diagnostic agents using membrane disruptive acid-sensitive polymers)

RN 282732-40-5 HCA

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with N-[4-[bis[3-(2-pyridinyldithio)propoxy]methyl]phenyl]-4-ethenyl-N-methylbenzenemethanamine and 2-(dimethylamino)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

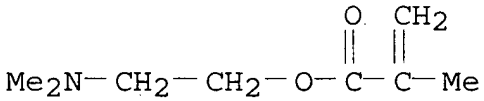
CM 1

CRN 282732-39-2
CMF C33 H37 N3 O2 S4



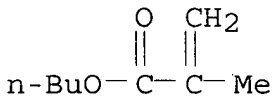
CM 2

CRN 2867-47-2
CMF C8 H15 N O2



CM 3

CRN 97-88-1
CMF C8 H14 O2



IC ICM A61K047-48
CC 63-6 (Pharmaceuticals)
IT Polymer degradation
(**hydrolytic**, **acid**; enhanced transport of therapeutic and diagnostic agents using membrane disruptive acid-sensitive polymers)
IT 63-42-3DP, Lactose, pyridylthioacetalstyrene-methacrylate polymer derivs. with with methoxy-PEG-thiols 554-38-1DP, Hexalysine, pyridylthioacetalstyrene-methacrylate polymer derivs. with with methoxy-PEG-thiols 2321-07-5DP, Fluorescein, pyridylthioacetalstyrene-methacrylate polymer derivs. with with methoxy-PEG-thiols 134874-49-0DP, fluorescein/hexalysine/lactose

derivs. of pyridylthioacetalstyrene-methacrylate polymers **282732-40-5DP**, reaction products with methoxy-PEG-thiol derivs. of fluorescein/hexalysine/lactose
(enhanced transport of therapeutic and diagnostic agents using membrane disruptive acid-sensitive polymers)

L36 ANSWER 7 OF 13 HCA COPYRIGHT 2003 ACS on STN
134:302930 Novel analysis of **deblocking** reaction in D-UV resists. Kameyama, Yasuhiro; Terasaki, Wataru; Takada, Yoshihiro; Nakano, Kouji (Technology Development Center, Kurosaki Plant, Mitsubishi Chemical Corporation, Kitakyushu, 806-0004, Japan). Journal of Photopolymer Science and Technology, 13(5), 667-671 (English) 2000. CODEN: JSTEEW. ISSN: 0914-9244. Publisher: Technical Association of Photopolymers, Japan.

AB **Deblocking** reaction mechanisms of 2 kinds of chem. amplified resist systems were studied using the in-situ FTIR measurement system. From the measured results, photoacid generation reaction consts., **deblocking** reaction orders for the acid concn. and **deblocking** reaction rate consts. were estd. In the case of 1-ethoxyethyl group, the **deblocking** reaction order for the acid concn. was very small (10-4). The activation energies of the **deblocking** reactions in an acetal type resist and a t-BOC type resist were calcd. from the Arrhenius plots of **deblocking** reaction consts. and these values were agreeable with the results of MO calcns.

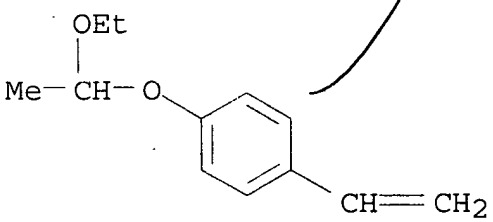
IT **158593-28-3**
°(photoacid generation and reaction order and acid concn. and deprotection reaction rates in measurement of **deblocking** reaction rate in deep UV resist of)

RN 158593-28-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

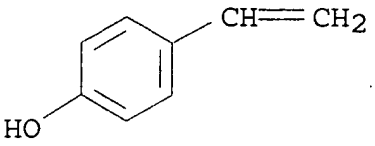
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 79
ST **deblock** deep UV resist hydroxystyrene ethoxyethyl butoxycarbonyl
IT Reaction mechanism
(**deblocking**; photoacid generation and reaction order and acid concn. and deprotection reaction rates in measurement of **deblocking** reaction rate in deep UV resist)
IT Resists
(deep-UV, chem.-amplified; photoacid generation and reaction order and acid concn. and deprotection reaction rates in measurement of **deblocking** reaction rate in deep UV resist)
IT IR spectra
(of **deblocking** reaction rate in deep UV resist)
IT Activation energy
Reaction constant
Reaction kinetics
(photoacid generation and reaction order and acid concn. and deprotection reaction rates in measurement of **deblocking** reaction rate in deep UV resist)
IT 129674-22-2, p-Hydroxystyrene-p-tert-butoxycarbonyloxystyrene copolymer **158593-28-3**
(photoacid generation and reaction order and acid concn. and deprotection reaction rates in measurement of **deblocking** reaction rate in deep UV resist of)
IT 144317-44-2
(photoacid generator; photoacid generation and reaction order and acid concn. and deprotection reaction rates in measurement of **deblocking** reaction rate in deep UV resist)

L36 ANSWER 8 OF 13 HCA COPYRIGHT 2003 ACS on STN
133:215450 Positive-working photosensitive composition containing silicone. Sakaguchi, Shinji (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000235264 A2 20000829, 49 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-143614 19990524. PRIORITY: JP 1998-354878 19981214.
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to a pos.-working photosensitive compn. contg.; (a) a water-insol. and alkali-sol. polymer having repeating unit I or II(X = -C=O, H, hydrocarbon, etc.; R'-''''' = OH, alkyl, cycloaralkyl, etc.; R0 = H, halo, hydrocarbon; r, s, t = 1-3 integer; u, v = 1, 2; l, m, n, q .gtoreq.0 integer; p>0 integer; R.alpha.-.gamma. = single bond, -(CH2)k-(Z.alpha.)-R.delta.; Z.alpha. = -COC-, -O-, -N(R.epsilon.)-; R.delta. = single bond, C1-12 alkylene; arylene, aralkyl; R.epsilon. = H, C1-10 alkyl; k = .gtoreq.0 integer; j = 0, 1); (b) a compd. generating an acid upon irradn. of actinic or radioactive ray; and (c) an polymer, which increases the soly. towards an alkali developer at the presence of an acid, having repeating unit -(C(R1)(R2)-C(R3)(R4-(G)f))a-, -(C(R5)(R6)-C(R7)(R8-(Q)g))b- (R1-3,5-7,9-11 = H, halo, alkyl, etc.; R4,9 =single bond, 2-5 valent specific aryl, amide group) and -(C(R9)(R10)-C(R11)(R12))c- and acid-sensitive group, and (d) a nitrogen contg. cyclic compd. and/or an aliph. amine having a carboxylic substituent. The compn. provides the high sensitivity and the high resoln. and is suitable for use in a semiconductor device prodn.

IT **289706-88-3**
(pos.-working photosensitive compn.)

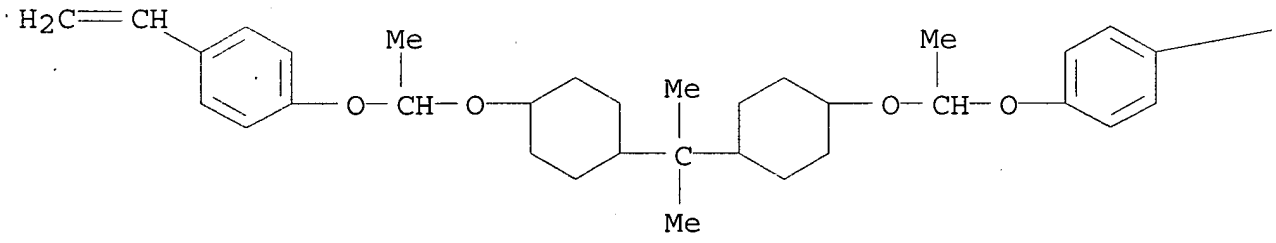
RN 289706-88-3 HCA

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with ethenylbenzene, 4-ethenylphenol and 1,1'-[(1-methylethylidene)bis(4,1-cyclohexanediyloxyethylideneoxy)]bis[4-ethenylbenzene] (9CI) (CA INDEX NAME)

CM 1

CRN 206861-56-5
CMF C35 H48 O4

PAGE 1-A

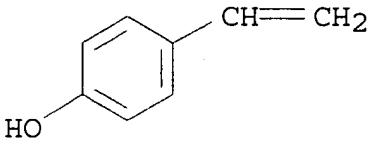


PAGE 1-B

CH
CH2

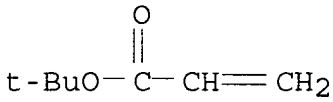
CM 2

CRN 2628-17-3
CMF C8 H8 O



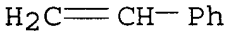
CM 3

CRN 1663-39-4
CMF C7 H12 O2



CM 4

CRN 100-42-5
CMF C8 H8



IC ICM G03F007-075
ICS C08L083-06; G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
IT 109-12-6, 2-Aminopyrimidine 119-65-3, Isoquinoline 260-94-6, Acridine 504-29-0, 2-Aminopyridine 534-85-0, 2-Aminodiphenylamine 580-20-1, 7-Hydroxyquinoline 607-31-8, 4-Methoxyquinoline 611-64-3, 9-Methylacridine 620-08-6, 4-Methoxypyridine 670-95-1, 4-Phenylimidazole 822-36-6, 4-Methylimidazole 18123-20-1, 4-Hydroxyacridine 23687-25-4, 4-Aminoisoquinoline 31401-45-3, 4-Dimethylaminopyrimidine 36631-19-3, Triphenyl imidazole 177034-67-2 287925-54-6 287925-56-8 288620-13-3 288620-15-5 289706-73-6 289706-75-8 289706-76-9 289706-79-2 289706-80-5 289706-81-6 289706-82-7 289706-83-8 289706-84-9 289706-85-0 289706-86-1 289706-87-2 **289706-88-3** 289706-90-7
(pos.-working photosensitive compn.)

L36 ANSWER 9 OF 13 HCA COPYRIGHT 2003 ACS on STN

133:81576 Positive-working resist composition for electron beam and x-ray exposure. Kodama, Kunihiko; Aogo, Toshiaki; Uenishi, Kazuya (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000187330 A2 20000704, 59 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-275334 19990928. PRIORITY: JP 1998-295609 19981016.

AB In the resist compns. contg. (a) a compd. which generates an acid by irradn. with an electron beam and x-ray, (b) a resin having groups which are cleaved by the action of acid to increase the soly. in alk. developing solns., and (c) a F-type and/or Si-type surfactant, the acid generator is a compd. generating a benzenesulfonic, naphthalenesulfonic or anthracenesulfonic acid substituted with .gtoreq.1 F and/or a .gtoreq.1 F-contg. group. The resist compns. may contain a low-mol.-wt. dissoln. inhibitor with mol. wt. .ltoreq.3000 which has an **acid-cleavable** group and of which the dissolving rate in alk. developing solns. increases by the action of acid and a resin insol. in water and sol. in alk. developing solns. in place of (b). The compns. show improved developability and provide high resoln. patterns with good profile.

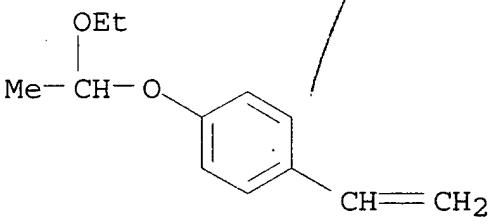
IT **158593-28-3DP**, p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene copolymer, ethers with poly(hydroxystyrene) **279244-35-8P** **279244-37-0P**
(radiation-sensitive resist compn. contg. acid generator, resin having acid-decomposable group, and surfactant)

RN 158593-28-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

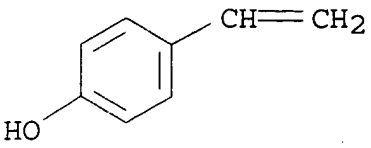
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

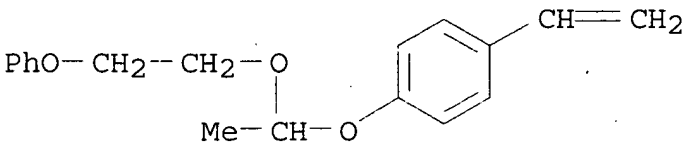
CRN 2628-17-3
CMF C8 H8 O



RN 279244-35-8 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenoxyethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

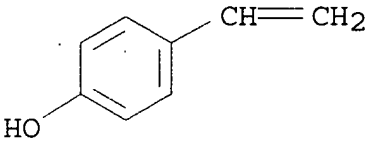
CM 1

CRN 279244-34-7
CMF C18 H20 O3



CM 2

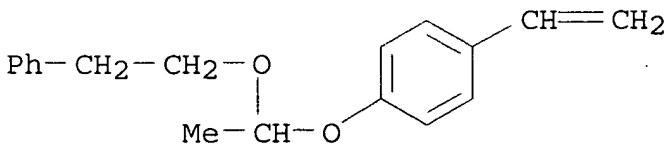
CRN 2628-17-3
CMF C8 H8 O



RN 279244-37-0 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

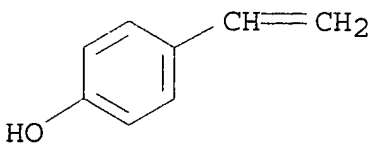
CM 1

CRN 246157-37-9
CMF C18 H20 O2



CM 2

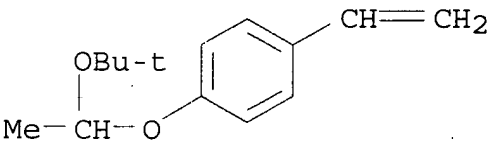
CRN 2628-17-3
CMF C8 H8 O



IT **196709-91-8**, p-(1-tert-Butoxyethoxy)styrene-p-hydroxystyrene copolymer
(radiation-sensitive resist compn. contg. acid generator, resin having acid-decomposable group, and surfactant)
RN 196709-91-8 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(1,1-dimethylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

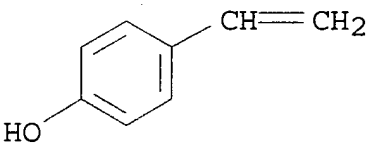
CM 1

CRN 169811-45-4
CMF C14 H20 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-039
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

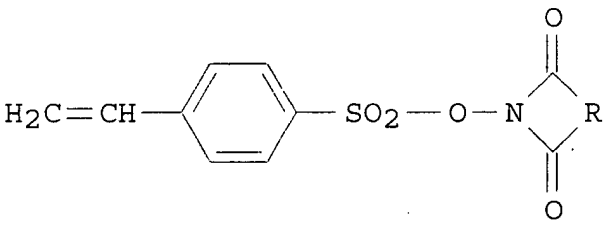
IT 24979-70-2DP, VP 8000, ethers 95418-59-0DP, p-tert-Butoxystyrene-styrene copolymer, **hydrolyzed** 147625-42-1P 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate **158593-28-3DP**, p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene copolymer, ethers with poly(hydroxystyrene) 160309-96-6DP, p-Acetoxystyrene-tert-butyl methacrylate copolymer, sapond. 212555-24-3DP, ethers with poly(hydroxystyrene) 258341-98-9P 270563-93-4P 270563-96-7P **279244-35-8P** **279244-37-0P**
(radiation-sensitive resist compn. contg. acid generator, resin having acid-decomposable group, and surfactant)

IT 24979-70-2, VP 15000 123658-11-7 142096-70-6 153698-66-9 **196709-91-8**, p-(1-tert-Butoxyethoxy)styrene-p-hydroxystyrene copolymer 270563-98-9 279244-39-2 279244-43-8 279244-45-0 279244-48-3 279244-50-7
(radiation-sensitive resist compn. contg. acid generator, resin having acid-decomposable group, and surfactant)

L36 ANSWER 10 OF 13 HCA COPYRIGHT 2003 ACS on STN

128:315136 Radiation-sensitive composition containing polymer acid-generator, pattern formation, and manufacture of semiconductor devices. Hattori, Takashi; Yamanaka, Nagako; Shiraishi, Hiroshi (Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.). Jpn. Kokai Tokkyo Koho JP 10111563 A2 19980428 Heisei, 14 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-265744 19961007.

GI



I

AB The polymer acid generator, which generates sulfonic acid on the polymer side chain by irradn., is a polymer of monomer units contg. I (R = arylene, alkylene, alkenylene). Radiation-sensitive compn. comprises a component (A) of which the soly. to alkali aq. soln. changes by an **acid-catalyzed** reaction, and a polymer acid-generating agent having N-(sulfonyloxy)carboxyimide group Q (R = same as above) on the side chain generating sulfonic acid by irradn.. The pattern forming method comprises steps of (1) coating the photosensitive compn., which contains the component A and a polymer acid-generating agent having sulfonic acid precursor on the side chain, on a support to form a film, and (2) patternwise exposing the film to active rays and developing it. Manuf. of semiconductor devices contg. the pattern-forming method is also claimed. Diffusion of acids to unexposed area under post baking

process is prevented, and high resoln. patterns are obtained.

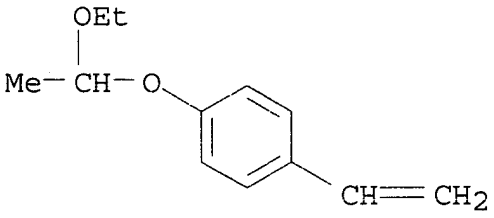
IT **206437-52-7P**
(radiation-sensitizer resist compn. contg. polymer acid generator having sulfonyloxycarboxyimide group)

RN 206437-52-7 HCA

CN 1H-Isoindole-1,3(2H)-dione, 2-[[(4-ethenylphenyl)sulfonyl]oxy]-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

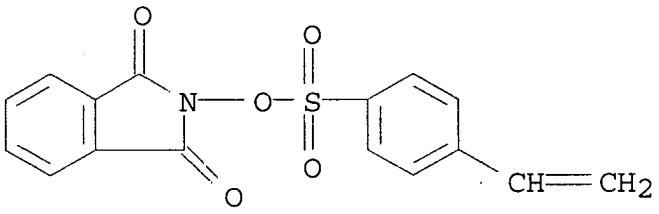
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

CRN 137961-76-3
CMF C16 H11 N O5 S



IC ICM G03F007-004
ICS G03F007-004; G03F007-038; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76

IT 24979-70-2DP, Poly(p-vinylphenol), ethers 122130-65-8DP, **hydrolyzed** 206437-51-6P **206437-52-7P** 206437-53-8P 206437-54-9P 206437-55-0P 206438-00-8P
(radiation-sensitizer resist compn. contg. polymer acid generator having sulfonyloxycarboxyimide group)

L36 ANSWER 11 OF 13 HCA COPYRIGHT 2003 ACS on STN

126:67521 Positive-working photosensitive composition containing poly(hydroxystyrene) derivatives. Urano, Toshoshi; Niimi, Takaaki;

Ochiai, Tameichi (Mitsubishi Chem Corp, Japan). Jpn. Kokai Tokkyo Koho JP 08262713 A2 19961011 Heisei, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-87497 19950320.

AB The title compn. contains a photosensitive org. polymer prepd. by copolymg. p-CH2:CR1C6H4OR2, p-CH2:CR3C6H4OR4, and p-CH2:CR5C6H4OH (10-50 : 1-10 : balance to 100 mol % of the total monomers) [R1, R3, R5 = H, Me; R2 = hydrophobic group selected from alkyl, aralkyl, aryl, (substituted) arom. hydrocarbon, (substituted) heterocycle, acyl, arylcarbonyl, and allycarbonyl groups or **acid-hydrolyzable** group selected from alkoxymethyl, tetrahydrofuranyl, tetrahydropyranyl, trialkylsilyl, and alkoxycarbonyl groups; R4 = 1,2-naphthoquinonediazido-4- or -5-sulfonate group]. The compn. shows high sensitivity in deep UV regions and the sensitivity and the quality of images are independent of the elapse of time after exposure. Thus, poly(p-hydroxystyrene) of which the H atoms of 22 mol % of the OH groups were replaced by tert-butoxycarbonyl group was reacted with 1,2-naphthoquinonediazido-4-sulfonyl chloride to give a polymer, which was used for the title compn.

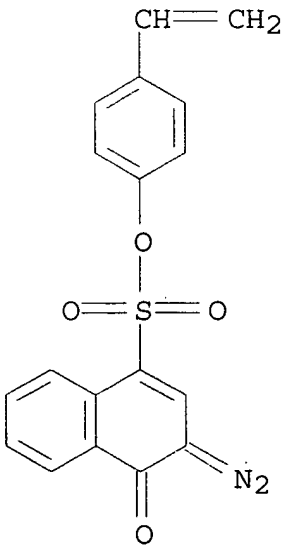
IT **185100-13-4P 185100-15-6P**
(pos.-working photoresist compn. contg. poly(hydroxystyrene) deriv.)

RN 185100-13-4 HCA

CN 1-Naphthalenesulfonic acid, 3-diazo-3,4-dihydro-4-oxo-, 4-ethenylphenyl ester, polymer with 4-ethenylphenol and 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

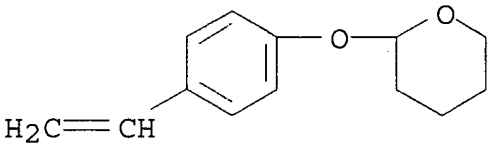
CM 1

CRN 162752-29-6
CMF C18 H12 N2 O4 S



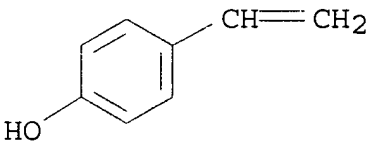
CM 2

CRN 65409-15-6
CMF C13 H16 O2



CM 3

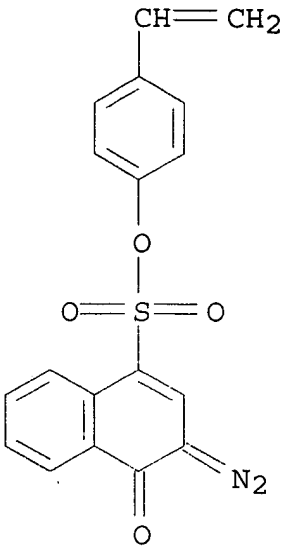
CRN 2628-17-3
CMF C8 H8 O



RN 185100-15-6 HCA
CN 1-Naphthalenesulfonic acid, 3-diazo-3,4-dihydro-4-oxo-, 4-ethenylphenyl ester, polymer with 4-ethenylphenol and 2-(4-ethenylphenoxy)tetrahydrofuran (9CI) (CA INDEX NAME)

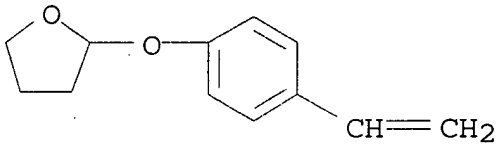
CM 1

CRN 162752-29-6
CMF C18 H12 N2 O4 S



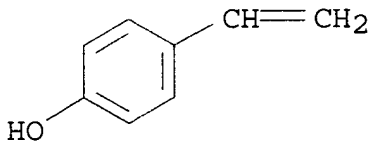
CM 2

CRN 123960-82-7
CMF C12 H14 O2



CM 3

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-023
ICS G03F007-023; G03F007-004; G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 37
IT 185100-09-8P 185100-12-3P **185100-13-4P**

185100-15-6P 185100-21-4P
(pos.-working photoresist compn. contg. poly(hydroxystyrene) deriv.)

L36 ANSWER 12 OF 13 HCA COPYRIGHT 2003 ACS on STN
125:301353 Some studies on the selective synthesis of sucrose acetates using template and random trityl chloride functionalized macroporous polymers. Macindoe, Wallace M.; Jenner, Mike; Williams, Andrew (Research Institute, Sankyo Co. Ltd., Tokyo, 140, Japan). Carbohydrate Research, 289, 151-161 (English) 1996. CODEN: CRBRAT. ISSN: 0008-6215. Publisher: Elsevier

AB The template 2,3,3',4,4'-penta-O-acetylsucrose [i.e., 3,4-di-O-acetyl-.beta.-D-fructofuranosyl-.alpha.-D-glucopyranoside 2,3,4-triacetate] was imbedded into a polymer matrix via trityl chloride linkers. Subsequent **hydrolytic** cleavage of 2,3,3',4,4'-penta-O-acetylsucrose rendered a macroporous polymeric template contg. trityl chloride functional groups. Sucrose was then bound to this template and treated with an acetylation agent. Sucrose acetate was obtained after **acidic cleavage** of the polymer. The target compd., 2,3,3',4',6-Penta-O-acetylsucrose (a precursor for sucralose) was obtained, albeit in low yield.

IT **182971-94-4P**
(macroporous polymer template-directed prepn. of sucrose acetates)

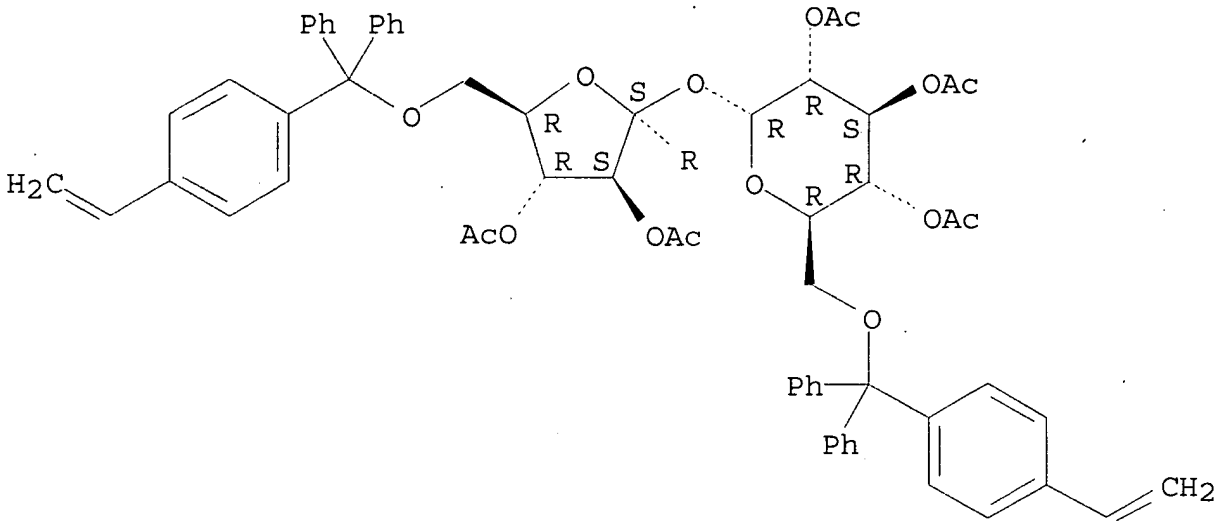
RN 182971-94-4 HCA
CN .alpha.-D-Glucopyranoside, 3,4-di-O-acetyl-1,6-bis-O-[(4-ethenylphenyl)diphenylmethyl]-.beta.-D-fructofuranosyl 6-O-[(4-ethenylphenyl)diphenylmethyl]-, triacetate, polymer with diethenylbenzene and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

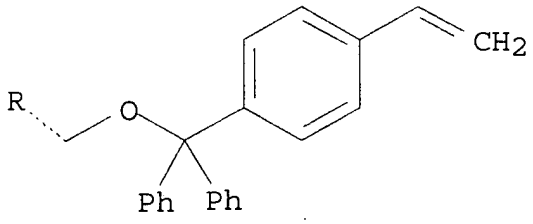
CRN 182914-91-6
CMF C85 H80 O16

Absolute stereochemistry. Rotation (+).

PAGE 1-A



PAGE 2-A



CM 2

CRN 1321-74-0
CMF C10 H10
CCI IDS

2 [D1—CH═CH$_2$]

CM 3

CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

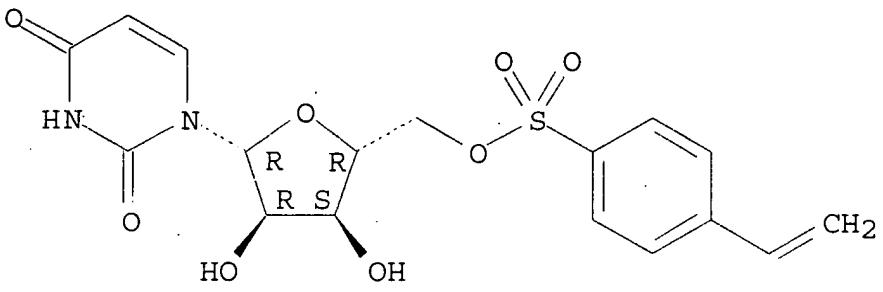
CC 33-3 (Carbohydrates)
IT 13830-69-8P 34382-02-0P, 2,3,3',4,4'-Penta-O-acetylsucrose
168781-81-5P 182914-91-6P **182971-94-4P**
(macroporous polymer template-directed prepn. of sucrose acetates)

L36 ANSWER 13 OF 13 HCA COPYRIGHT 2003 ACS on STN
121:10094 Synthesis of a new polymer containing uridine and galactose as pendent groups. Hatanaka, Kenichi; Takeshige, Hideyuki; Akaike, Toshihiro (Dep. Biomol. Eng., Tokyo Inst. Technol., Yokohama, 227, Japan). Journal of Carbohydrate Chemistry, 13(4), 603-10 (English) 1994. CODEN: JCACDM. ISSN: 0732-8303.
AB A new styrene compd. contg. a derivatized uridine unit, i.e., 2',3'-O-isopropylideneuridine 5'-p'-styrenesulfonate (I), was synthesized and polymd. with AIBN as an initiator. Removal of protecting isopropylidene groups from the obtained polymer gave uridine-contg. polystyrene. Uridine-contg. polystyrene was synthesized also by the polymn. of the deprotected monomer (II), which had been prepd. by removal of isopropylidene group from I. Copolymn. of I with a styrene monomer having a galactosyl moiety, i.e., N-p-vinylbenzyl-4-O-(.beta.-D-galactopyranosyl)-D-gluconamide1 (III), was carried out in DMSO. However, the deprotection of the obtained copolymer failed, because the lactonamide portion was severed in the process of deisopropylidenation. On the other hand, the copolymn. of II with III in DMF and in water with AIBN as an initiator gave the target copolymer which contained both uridine and galactose residues. Polymers and copolymers were characterized by 1H NMR spectroscopy. 9025-35-8 512-69-6.
IT **155888-10-1P**
(prepn. and NMR spectrum of)
RN 155888-10-1 HCA
CN D-Gluconamide, N-[(4-ethenylphenyl)methyl]-4-O-.beta.-D-galactopyranosyl-, polymer with uridine 5'-(4-ethenylbenzenesulfonate) (9CI) (CA INDEX NAME)

CM 1

CRN 155888-08-7
CMF C17 H18 N2 O8 S

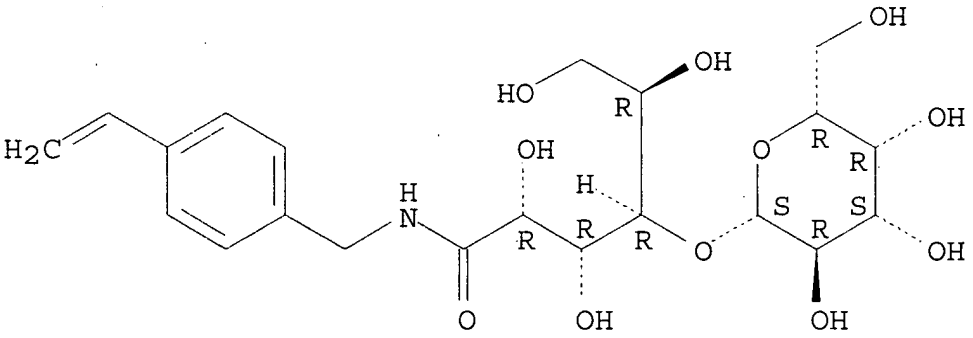
Absolute stereochemistry.



CM 2

CRN 96886-53-2
CMF C21 H31 N O11

Absolute stereochemistry.



CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 6
IT 155888-07-6P
(prepn. and NMR spectrum and hydroxyl groups deproptection of, by **acidic hydrolysis**)
IT **155888-10-1P**
(prepn. and NMR spectrum of)

=> d l37 1-20 cbib abs hitstr hitind

L37 ANSWER 1 OF 20 HCA COPYRIGHT 2003 ACS on STN
137:263361 Synthesis of amphiphilic triblock copolymer of polystyrene and poly(4-vinylbenzyl glucoside) via TEMPO-mediated **living** radical **polymerization**. Narumi, Atsushi; Matsuda, Takeshi; Kaga, Harumi; Satoh, Toshifumi; Kakuchi, Toyoji (Graduate School of Engineering, Division of Molecular Chemistry, Hokkaido University, Sapporo, 060-8628, Japan). Polymer, 43(17), 4835-4840 (English) 2002. CODEN: POLMAG. ISSN: 0032-3861. Publisher:

Elsevier Science Ltd..

AB 4-Vinylbenzyl glucoside peracetate 1 was polymd. with .alpha.,.alpha.'-bis(2',2',6',6'-tetramethyl-1'-piperidinyloxy)-1,4-diethylbenzene 2 in chlorobenzene using (1S)-(+)-10-camphorsulfonic acid anhyd. (CSA) as an accelerator ([1]=0.4 M, [1]/[2]/[CSA]=75/1/1.3) at 125 .degree.C for 5 h. The polymn. afforded poly(4-vinylbenzyl glucoside peracetate) having TEMPO moieties on both sides of the chain ends, 3, with a mol. wt. (Mw,SLS) of 8500, a polydispersity index (Mw/Mn) of 1.09, and an av. d.p. of the 1 unit (x) of 17. Styrene (St) was polymd. with 3 in chlorobenzene at 125.degree. (St/chlorobenzene=1/2, wt./wt.). The polymn. successfully afforded polystyrene-poly(4-vinyl glucoside peracetate)-polystyrene, 4, when the polymn. time was below about 2 h. Polymer 4 with the Mw,SLS of 12,500, 17,900, and 29,400, the compns. (y-x-y) of 20-17-20, 45-17-45, and 100-17-100, and the Mw/Mn of 1.12, 1.14 and 1.17 were modified by deacetylation using sodium methoxide in dry-THF into polystyrene-poly(4-vinyl glucoside peracetate)-polystyrene, 5. The soly. of polymer 5 was examd. using a good solvent for polystyrene such as toluene and for the saccharide such as H2O.

IT **404588-18-7P**, Styrene-4-vinylbenzyl glucoside peracetate block copolymer
(synthesis of amphiphilic triblock copolymer of polystyrene and poly(4-vinylbenzyl glucoside))

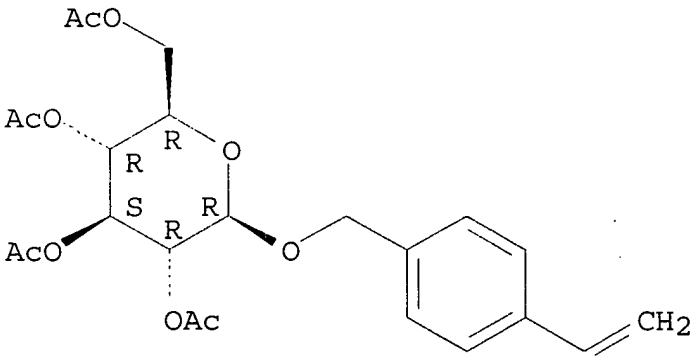
RN 404588-18-7 HCA

CN .beta.-D-Glucopyranoside, (4-ethenylphenyl)methyl, tetraacetate, polymer with ethenylbenzene, block (9CI) (CA INDEX NAME)

CM 1

CRN 372989-18-9
CMF C23 H28 O10

Absolute stereochemistry.



CM 2

CRN 100-42-5

CMF C8 H8

$H_2C{=}CH{-}Ph$

CC 35-4 (Chemistry of Synthetic High Polymers)
IT **Polymerization**
(**living**, radical; synthesis of amphiphilic triblock copolymer of polystyrene and poly(4-vinylbenzyl glucoside))
IT **404588-18-7P**, Styrene-4-vinylbenzyl glucoside peracetate block copolymer
(synthesis of amphiphilic triblock copolymer of polystyrene and poly(4-vinylbenzyl glucoside))

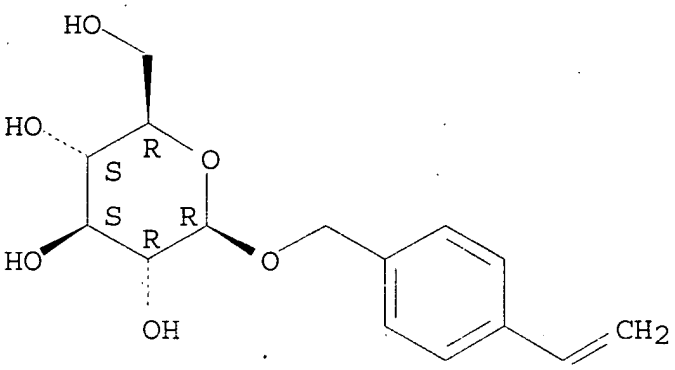
L37 ANSWER 2 OF 20 HCA COPYRIGHT 2003 ACS on STN
136:247975 Glycoconjugated polymer II. Synthesis of polystyrene-block-poly(4-vinylbenzyl glucoside) and polystyrene-block-poly(4-vinylbenzyl maltohexaoside) via 2,2,6,6-tetramethylpiperidine-1-oxyl-mediated **living** radical **polymerization**. Narumi, Atsushi; Matsuda, Takeshi; Kaga, Harumi; Satoh, Toshifumi; Kakuchi, Toyoji (Division of Molecular Chemistry, Graduate School of Engineering, Hokkaido University, Sapporo, 060-8628, Japan). Polymer Journal (Tokyo, Japan), 33(12), 939-945 (English) 2001. CODEN: POLJB8. ISSN: 0032-3896. Publisher: Society of Polymer Science, Japan.
AB The polymns. of glycoconjugated monomers, i.e., 4-vinylbenzyl glucoside peracetate (1a) and 4-vinylbenzyl maltohexaoside peracetate (1b), were carried out using 2,2,6,6-tetramethylpiperidine-1-oxyl-terminated polystyrene (PS-TEMPO, Mn = 8100 and Mw/Mn = 1.17) as a macromol. initiator in xylene at 120.degree.C ([1]/[PS-TEMPO] = 25). The Mn of the product increased from 9900 to 12700 for the polystyrene-block-poly-1a (2a) and from 14200 to 16200 for the polystyrene-block-poly-1b (2b) with the increasing polymn. time, whereas the Mw/Mn values were const. at 1.13-1.21. The deacetylation of 2a and 2b using sodium methoxide in dry-THF provided amphiphilic block copolymers contg. glucose and maltohexaose as hydrophilic segments, i.e., polystyrene-block-poly(4-vinylbenzyl glucoside) (3a) and polystyrene-block-poly(4-vinylbenzyl maltohexaoside) (3b). The soln. property of the block copolymers 3a and 3b in toluene (a good solvent for polystyrene) and H2O (a good solvent for saccharides) varied depending on the wt. fraction of the glucose residues (fg, wt%) in 3, i.e., 3a with an fgs of 4, 10, and 14 wt% formed reversed micelle-like aggregate in toluene, whereas 3a with an fg of 17 wt% and 3b with an fg of 37 and 50 wt% formed micelle-like aggregates in H2O.
IT **404588-22-3DP**, deacetylated with sodium methoxide/MeOH
404588-24-5DP, deacetylated with sodium methoxide/MeOH
(prepn. of polystyrene-block-poly(4-vinylbenzyl glucoside) and polystyrene-block-poly(4-vinylbenzyl maltohexaoside) via 2,2,6,6-tetramethylpiperidine-1-oxyl-mediated **living** radical **polymn**.)
RN 404588-22-3 HCA

CN .beta.-D-Glucopyranoside, (4-ethenylphenyl)methyl, polymer with ethenylbenzene, block (9CI) (CA INDEX NAME)

CM 1

CRN 141392-81-6
CMF C15 H20 O6

Absolute stereochemistry.



CM 2

CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

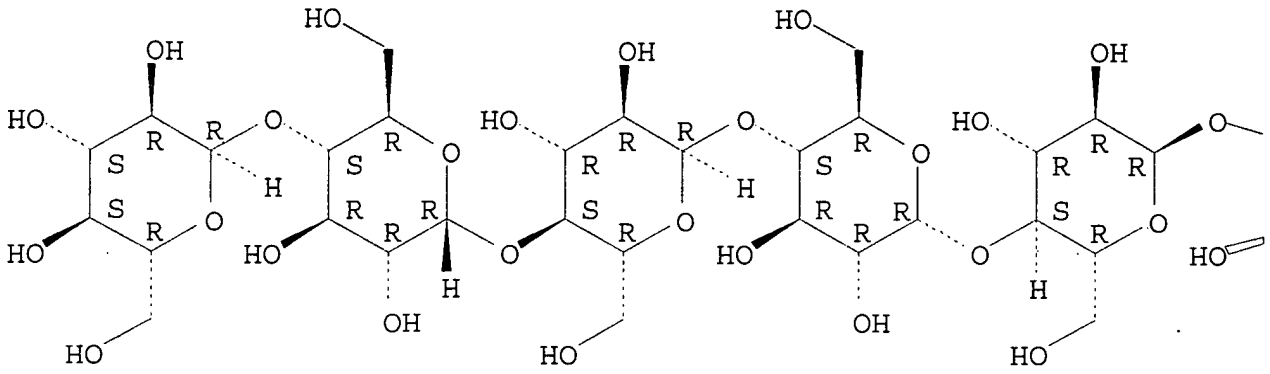
RN 404588-24-5 HCA
CN .beta.-D-Glucopyranoside, (4-ethenylphenyl)methyl O-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-, polymer with ethenylbenzene, block (9CI) (CA INDEX NAME)

CM 1

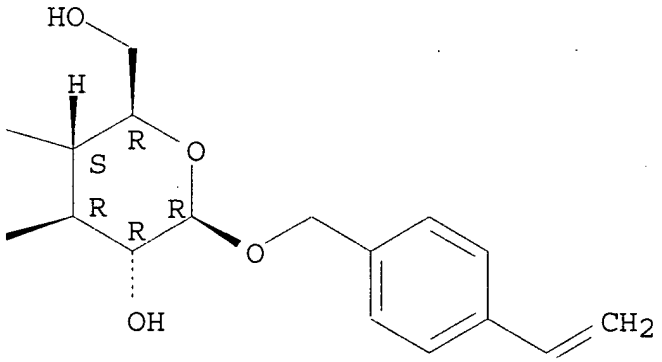
CRN 404588-23-4
CMF C45 H70 O31

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



CM 2

CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

IT **404588-18-7P**, Styrene-4-vinylbenzyl glucoside peracetate block copolymer **404588-20-1P**, Styrene-4-vinylbenzyl maltohexaoside peracetate block copolymer
(prepn. of polystyrene-block-poly(4-vinylbenzyl glucoside) and polystyrene-block-poly(4-vinylbenzyl maltohexaoside) via 2,2,6,6-tetramethylpiperidine-1-oxyl-mediated **living** radical **polymn**.)

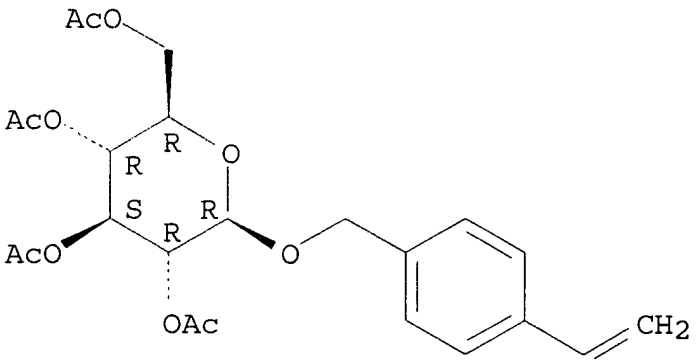
RN 404588-18-7 HCA

CN .beta.-D-Glucopyranoside, (4-ethenylphenyl)methyl, tetraacetate, polymer with ethenylbenzene, block (9CI) (CA INDEX NAME)

CM 1

CRN 372989-18-9
CMF C23 H28 O10

Absolute stereochemistry.



CM 2

CRN 100-42-5
CMF C8 H8

H_2C═CH— Ph

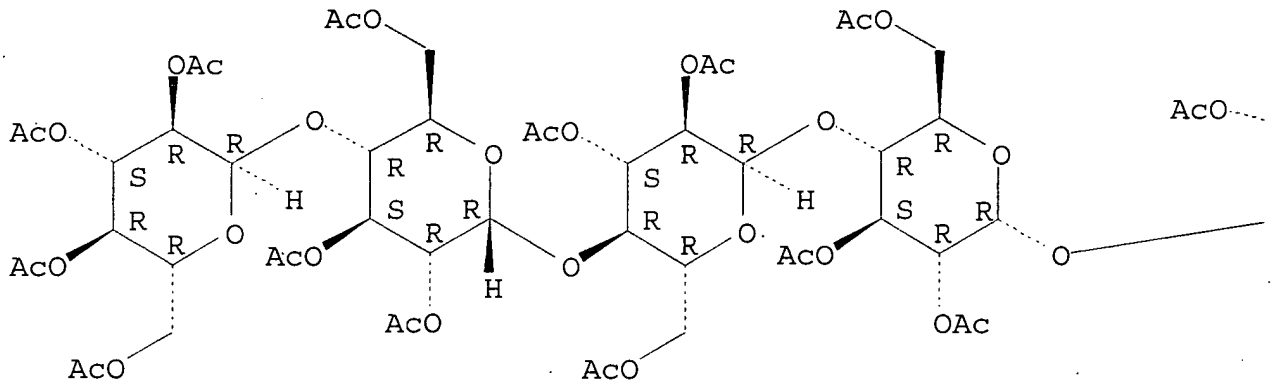
RN 404588-20-1 HCA
CN .beta.-D-Glucopyranoside, (4-ethenylphenyl)methyl O-2,3,4,6-tetra-O-acetyl-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-2,3,6-tri-O-acetyl-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-2,3,6-tri-O-acetyl-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-2,3,6-tri-O-acetyl-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-2,3,6-tri-O-acetyl-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-, triacetate, polymer with ethenylbenzene, block (9CI) (CA INDEX NAME)

CM 1

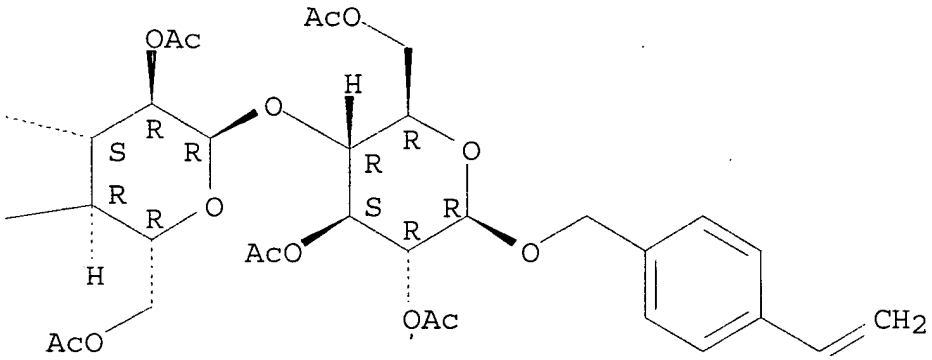
CRN 393085-51-3
CMF C83 H108 O50

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



CM 2

CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 33

IT **Polymerization** catalysts
(**living**, radical; in prepn. of polystyrene-block-poly(4-vinylbenzyl glucoside) and polystyrene-block-poly(4-vinylbenzyl maltohexaoside))

IT **Polymerization**
(**living**, radical; prepn. of polystyrene-block-poly(4-

vinylbenzyl glucoside) and polystyrene-block-poly(4-vinylbenzyl maltohexaoside) via 2,2,6,6-tetramethylpiperidine-1-oxyl-mediated **living** radical **polymn**.)

IT 154554-67-3
(catalyst; prepn. of polystyrene-block-poly(4-vinylbenzyl glucoside) and polystyrene-block-poly(4-vinylbenzyl maltohexaoside) via 2,2,6,6-tetramethylpiperidine-1-oxyl-mediated **living** radical **polymn**.)

IT **404588-22-3DP**, deacetylated with sodium methoxide/MeOH
404588-24-5DP, deacetylated with sodium methoxide/MeOH
(prepn. of polystyrene-block-poly(4-vinylbenzyl glucoside) and polystyrene-block-poly(4-vinylbenzyl maltohexaoside) via 2,2,6,6-tetramethylpiperidine-1-oxyl-mediated **living** radical **polymn**.)

IT **404588-18-7P**, Styrene-4-vinylbenzyl glucoside peracetate block copolymer **404588-20-1P**, Styrene-4-vinylbenzyl maltohexaoside peracetate block copolymer
(prepn. of polystyrene-block-poly(4-vinylbenzyl glucoside) and polystyrene-block-poly(4-vinylbenzyl maltohexaoside) via 2,2,6,6-tetramethylpiperidine-1-oxyl-mediated **living** radical **polymn**.)

L37 ANSWER 3 OF 20 HCA COPYRIGHT 2003 ACS on STN

135:296088 Study of **deprotection** reaction during exposure in chemically amplified **resists** for lithography simulation. Miyake, Yasuhiro; Isono, Mariko; Sekiguchi, Atsushi (Litho Tech Japan Corporation, Saitama, 332-0034, Japan). Journal of Photopolymer Science and Technology, 14(3), 463-468 (English) 2001. CODEN: JSTEEW. ISSN: 0914-9244. Publisher: Technical Association of Photopolymers, Japan.

AB **Deprotection** reactions of chem. amplified **resists** during exposure are obsd. by using the in-situ FTIR with the 248nm light source, and **resist** profiles are simulated using the activation energy and the prefactor calcd. The **resists** used in this expt. are poly(p-hydroxystyrene) (PHS) protected by ethoxyethyl group, by tert-butoxycarbonyl (t-BOC) group and by these heterogeneous protection groups. The activation energy for the ethoxyethyl **resist** is much lower than that for the t-BOC **resist**. The existence of heterogeneous protection groups affect mutually **deprotection** reactions; the EOE group addns. to t-BOC **resist** reduce the activation energy for the **deprotection** reaction of t-BOC group. Existences of heterogeneous protection groups affect the formation of **resist** pattern profile by lithog. simulator.

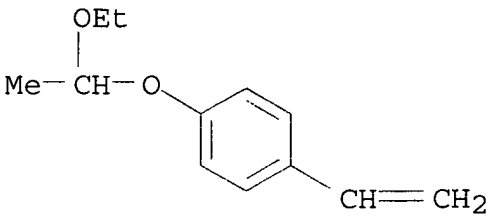
IT **177034-75-2**
(**deprotection** reaction during exposure in chem. amplified **resists** for lithog. simulation)

RN 177034-75-2 HCA

CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

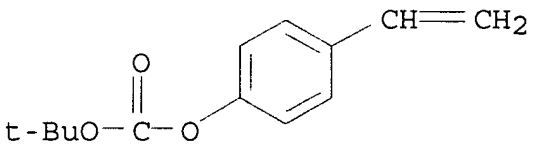
CM 1

CRN 157057-20-0
CMF C12 H16 O2



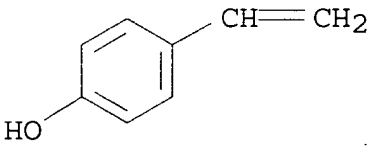
CM 2

CRN 87188-51-0
CMF C13 H16 O3



CM 3

CRN 2628-17-3
CMF C8 H8 O



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76

ST **deprotection** ethoxyethyl butoxycarbonyl amplified **resist** lithog simulation semiconductor device

IT **Resists**
(chem. amplified; **deprotection** reaction during exposure in chem. amplified **resists** for lithog. simulation)

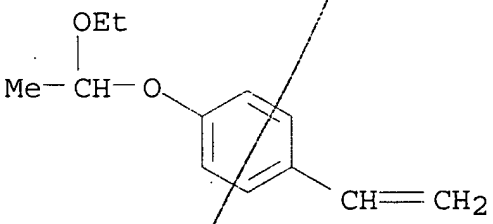
IT IR spectra
Lithography
Photolysis
(**deprotection** reaction during exposure in chem.

amplified **resists** for lithog. simulation)
IT 66003-78-9 **177034-75-2**
(**deprotection** reaction during exposure in chem. amplified **resists** for lithog. simulation)

L37 ANSWER 4 OF 20 HCA COPYRIGHT 2003 ACS on STN
133:18002 Ester monomers, polymers, **resist** compositions and patterning process. Kinsho, Takeshi; Nishi, Tsunehiro; Kurihara, Hideshi; Hasegawa, Koji; Watanabe, Takeru; Watanabe, Osamu; Nakashima, Mutsuo; Takeda, Takanobu; Hatakeyama, Jun (Shin-Etsu Chemical Co., Ltd., Japan). Eur. Pat. Appl. EP 1004568 A2 20000531, 65 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 1999-308687 19991102. PRIORITY: JP 1998-312533 19981102; JP 1999-75355 19990319.
AB An ester compd. having an exo-form 2-alkylbicyclo[2.2.1]heptan-2-yl group as the protective group is provided as well as a polymer comprising units of the ester compd. The polymer is used as a base resin to formulate a **resist** compn. having a higher sensitivity, resoln. and etching resistance than conventional **resist** compns. A polymer was prepd. from 8-ethyltricyclo[5.2.1.02,6]decan-8-yl methacrylate and 5-methyl-2-oxooxolan-5-yl methacrylate.
IT **177034-75-2P 271599-47-4P 271599-48-5P 271599-49-6P 271599-50-9P 271599-51-0P 271599-52-1P 271599-60-1P**
(ester monomers, polymers, **resist** compns. and patterning process)
RN 177034-75-2 HCA
CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

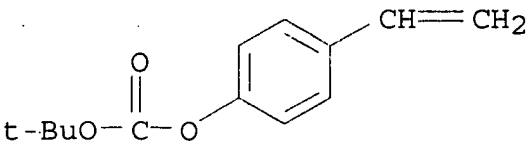
CM 1

CRN 157057-20-0
CMF C12 H16 O2



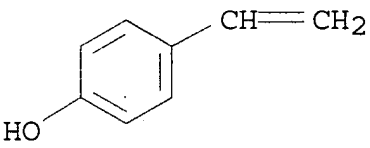
CM 2

CRN 87188-51-0
CMF C13 H16 O3



CM 3

CRN 2628-17-3
CMF C8 H8 O

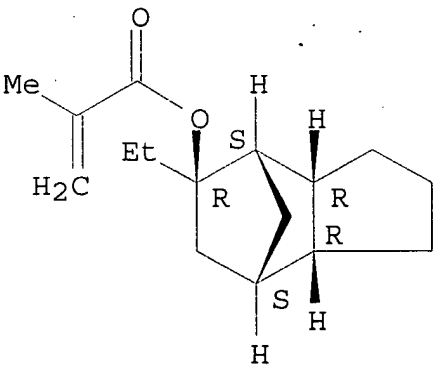


RN 271599-47-4 HCA
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 4-ethenylphenol and 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

CM 1

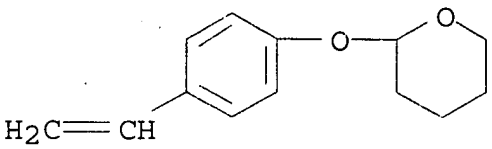
CRN 271598-65-3
CMF C16 H24 O2

Relative stereochemistry.



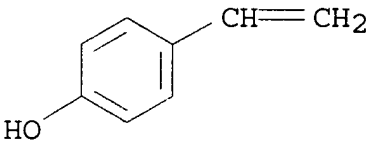
CM 2

CRN 65409-15-6
CMF C13 H16 O2



CM 3

CRN 2628-17-3
CMF C8 H8 O

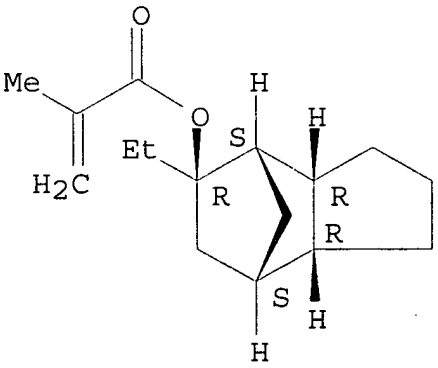


RN 271599-48-5 HCA
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

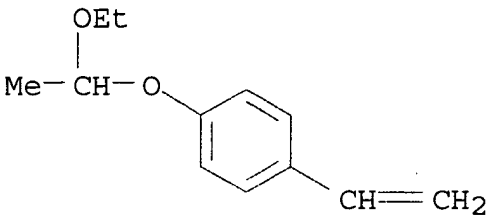
CRN 271598-65-3
CMF C16 H24 O2

Relative stereochemistry.



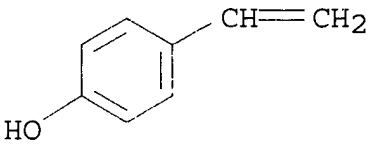
CM 2

CRN 157057-20-0
CMF C12 H16 O2



CM 3

CRN 2628-17-3
CMF C8 H8 O

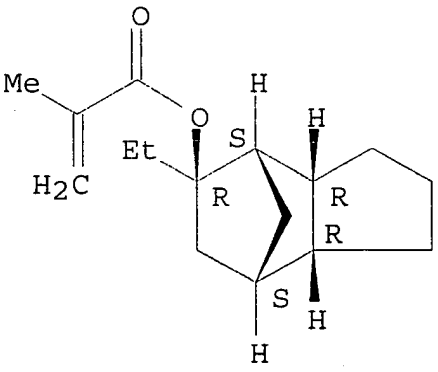


RN 271599-49-6 HCA
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 1,1-dimethylethyl 4-ethenylphenyl carbonate, 4-ethenylphenol and 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

CM 1

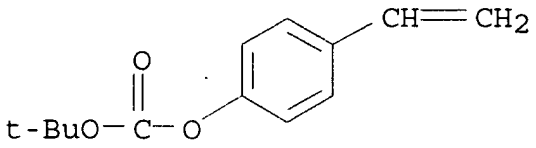
CRN 271598-65-3
CMF C16 H24 O2

Relative stereochemistry.



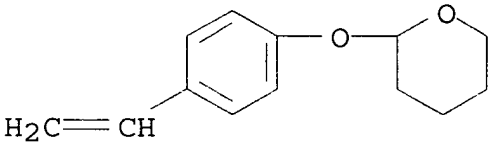
CM 2

CRN 87188-51-0
CMF C13 H16 O3



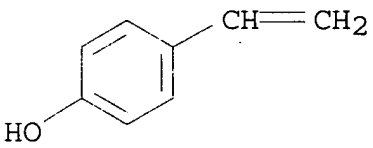
CM 3

CRN 65409-15-6
CMF C13 H16 O2



CM 4

CRN 2628-17-3
CMF C8 H8 O

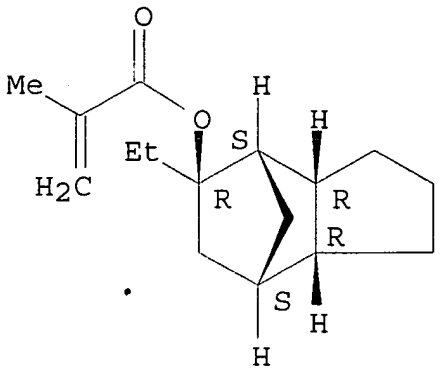


RN 271599-50-9 HCA
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 1,1-dimethylethyl 4-ethenylphenyl carbonate, 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

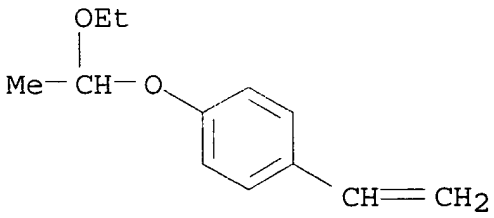
CRN 271598-65-3
CMF C16 H24 O2

Relative stereochemistry.



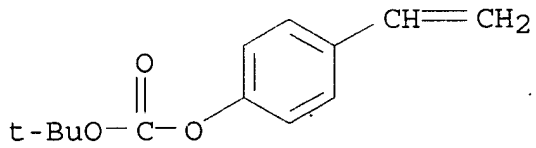
CM 2

CRN 157057-20-0
CMF C12 H16 O2



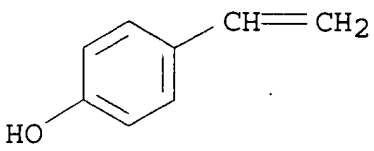
CM 3

CRN 87188-51-0
CMF C13 H16 O3



CM 4

CRN 2628-17-3
CMF C8 H8 O

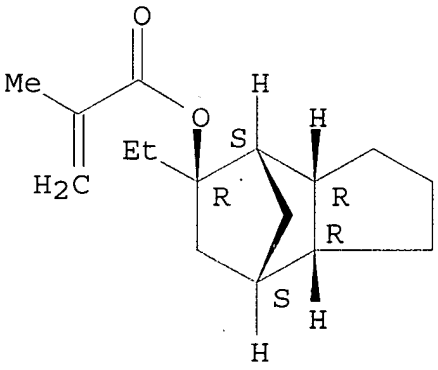


RN 271599-51-0 HCA
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 1-[1-(cyclohexyloxy)ethoxy]-4-ethenylbenzene, 1,1-dimethylethyl 4-ethenylphenyl carbonate and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

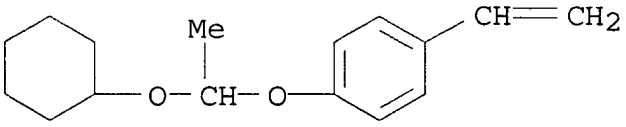
CRN 271598-65-3
CMF C16 H24 O2

Relative stereochemistry.



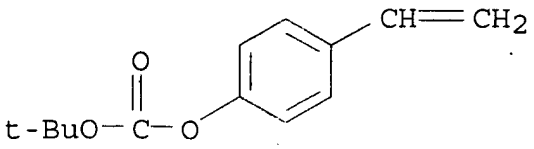
CM 2

CRN 190434-67-4
CMF C16 H22 O2



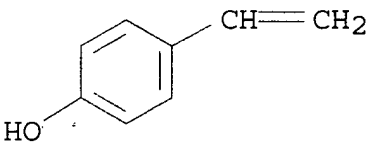
CM 3

CRN 87188-51-0
CMF C13 H16 O3



CM 4

CRN 2628-17-3
CMF C8 H8 O

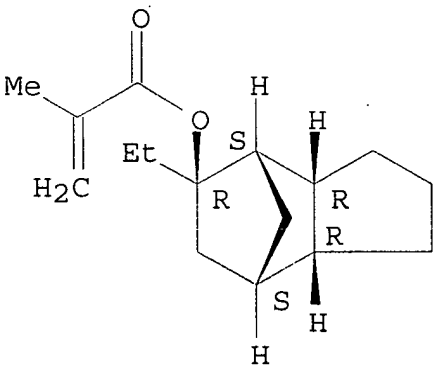


RN 271599-52-1 HCA
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 1,1-dimethylethyl 4-ethenylphenyl carbonate, 1-ethenyl-4-(1-ethoxypropoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 271598-65-3
CMF C16 H24 O2

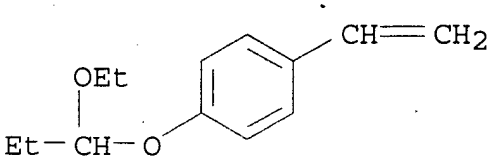
Relative stereochemistry.



CM 2

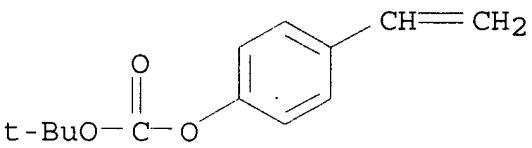
CRN 192314-49-1

CMF C13 H18 O2



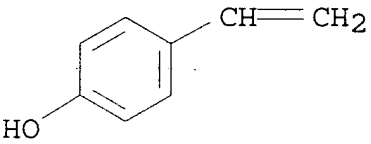
CM 3

CRN 87188-51-0
CMF C13 H16 O3



CM 4

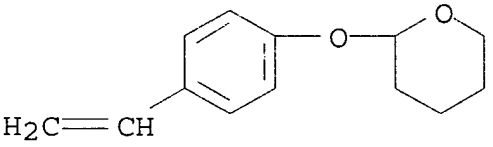
CRN 2628-17-3
CMF C8 H8 O



RN 271599-60-1 HCA
CN 2-Propenoic acid, 2-methyl-, polymer with 4-ethenylphenol and 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

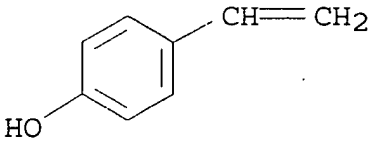
CM 1

CRN 65409-15-6
CMF C13 H16 O2



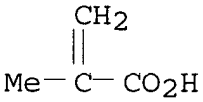
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

CRN 79-41-4
CMF C4 H6 O2



IC ICM C07C069-54
ICS G03F007-039; C08F020-06
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 74
ST bicycloheptanyl methacrylate polymer **resist**
IT **Polymerization**
(**anionic**; ester monomers, **polymers**, **resist** compns. and patterning process)
IT Polymerization
(coordination; ester monomers, polymers, **resist** compns. and patterning process)
IT **Resists**
(ester monomers, polymers, **resist** compns. and patterning process)
IT Polymerization
(radical; ester monomers, polymers, **resist** compns. and patterning process)
IT 119183-99-2P 271598-63-1P 271598-64-2P 271598-65-3P
271598-66-4P 271598-67-5P 271598-68-6P 271598-69-7P
271598-70-0P
(ester monomers, polymers, **resist** compns. and patterning process)
IT 155040-27-0P **177034-75-2P** 195154-78-0P 195154-83-7P
258871-96-4P 271598-71-1P 271598-72-2P 271598-73-3P
271598-74-4P 271598-75-5P 271598-76-6P 271598-78-8P
271598-81-3P 271598-84-6P 271598-86-8P 271598-89-1P
271598-91-5P 271598-94-8P 271598-97-1P 271599-00-9P
271599-03-2P 271599-06-5P 271599-09-8P 271599-11-2P
271599-14-5P 271599-16-7P 271599-18-9P 271599-21-4P

271599-24-7P 271599-26-9P 271599-28-1P 271599-30-5P
271599-32-7P 271599-33-8P 271599-34-9P 271599-35-0P
271599-36-1P 271599-37-2P 271599-38-3P 271599-39-4P
271599-40-7P 271599-41-8P 271599-42-9P 271599-43-0P
271599-44-1P 271599-45-2P 271599-46-3P **271599-47-4P**
271599-48-5P **271599-49-6P** **271599-50-9P**
271599-51-0P **271599-52-1P** 271599-53-2P
271599-54-3P 271599-55-4P 271599-56-5P 271599-57-6P
271599-59-8P **271599-60-1P** 271599-61-2P 271779-09-0P
271779-10-3P 271779-11-4P 271779-12-5P 271779-13-6P
271779-14-7P 271779-15-8P
(ester monomers, polymers, **resist** compns. and patterning process)

IT 74-96-4, Ethyl bromide 497-38-1, Bicyclo[2.2.1]heptan-2-one 920-46-7 13380-94-4, Tricyclo[5.2.1.02,6]decan-8-one
(ester monomers, polymers, **resist** compns. and patterning process)

L37 ANSWER 5 OF 20 HCA COPYRIGHT 2003 ACS on STN
132:173285 Design concepts of single-layer **resists** for vacuum ultraviolet lithography. Kishimura, Shinji; Katsuyama, Akiko; Sasago, Masaru; Shirai, Masamitsu; Tsunooka, Masahiro (ULSI Process Technology Development Center, Semiconductor Company, Matsushita Electronics Corporation, Kyoto, 601-8413, Japan). Japanese Journal of Applied Physics, Part 1: Regular Papers, Short Notes & Review Papers, 38(12B), 7103-7108 (English) 1999. CODEN: JAPNDE. ISSN: 0021-4922. Publisher: Japanese Journal of Applied Physics.

AB The authors studied the possible use of single-layer **resists** in vacuum UV (VUV) lithog. The transmittance in the VUV region of commonly used polymers for **photoresists** were almost the same. These values were .apprx.20% at 157 nm per 1000 .ANG.-thickness at most. The transmittance at 157 nm of a poly(p-hydroxystyrene) (PHS)-type polymer was slightly increased by halogenation of the arom. group. Neg. working behavior was obsd. for PHS-type **resists**. Probably both crosslinking and **deprotection** occurred in PHS-type polymers. A methacrylate-type **resist** showed high contrast due to the photodecompn. of the base polymer and photo-**deprotection** in addn. to acidic **deprotection**. It was estd. that the resoln. capability of this **resist** was 80 nm lines and spaces (L/S) (.lambda.157 nm, NA 0.65) using a PROLITH/3D lithog. simulator with exptl. dissoln. data.

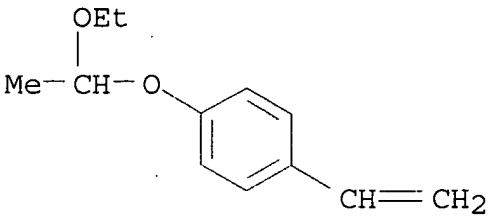
IT **157057-21-1**
(transparency and exposure characteristics and design concepts of polymers and single-layer **resists** for vacuum UV lithog.)

RN 157057-21-1 HCA

CN Benzene, 1-ethenyl-4-(1-ethoxyethoxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 157057-20-0
CMF C12 H16 O2



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST design **resist** vacuum UV lithog
IT Lithography
(VUV; transparency and exposure characteristics and design concepts of polymers and single-layer **resists** for vacuum UV lithog.)
IT Phenolic resins, properties
(novolak, cresol-based; transparency and exposure characteristics and design concepts of polymers and single-layer **resists** for vacuum UV lithog.)
IT UV and visible spectra
(transmission; transparency and exposure characteristics and design concepts of polymers and single-layer **resists** for vacuum UV lithog.)
IT Dissolution
IR spectra
Photolysis
Photoresists
(transparency and exposure characteristics and design concepts of polymers and single-layer **resists** for vacuum UV lithog.)
IT Polymers, properties
(transparency and exposure characteristics and design concepts of polymers and single-layer **resists** for vacuum UV lithog.)
IT 99-89-8, 4-Isopropylphenol 9011-14-7, PMMA 9016-83-5, Cresol-formaldehyde copolymer 24979-70-2, Poly(p-hydroxystyrene) 25189-00-8, Poly(tert-butylmethacrylate) 87261-04-9, Poly(p-tert-butoxycarbonyloxystyrene) 123960-81-6, Poly(p-tetrahydropyranyloxystyrene) 152845-53-9 **157057-21-1** 170283-35-9 258874-90-7 258874-91-8 258874-92-9 258874-93-0
(transparency and exposure characteristics and design concepts of polymers and single-layer **resists** for vacuum UV lithog.)

L37 ANSWER 6 OF 20 HCA COPYRIGHT 2003 ACS on STN
131:229181 Poly[1-(1-alkoxyalkoxy)-4-ethenylbenzenes] with narrow polydispersity and their manufacture. Yamamoto, Yoshihiro; Takao,

Toshiro; Fukuda, Ritsuko; Ikeda, Keiichi; Hara, Akira (Mitsui Chemicals Inc., Japan). Jpn. Kokai Tokkyo Koho JP 11255826 A2 19990921 Heisei, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-61454 19980312.

AB Poly[1-(1-alkoxyalkoxy)-4-ethenylbenzenes] having repeating unit CH2CH-p-C6H4OCH(OR3)CHR1R2 [R1 = H, C1-3 alkyl; R2 = H, C1-6 alkyl, C1-6 alkoxy; R3 = alkoxy-(un)substituted C1-20 alkyl, C5-10 cycloalkyl, C6-20 alkoxy-(un)substituted aryl], Mw 1000-100,000, and Mw/Mn 1.0-1.6, useful for chem. amplified pos. **resists**, are manufd. by **anionic polymn**. of H2C:CH-p-C6H4OCH(OR3)CHR1R2 by the use of org. alkali metal compds. or alkali metals as the polymn. initiators. Thus, 10.0 g p-hydroxystyrene was treated with 6.13 g Et vinyl ether in CH2Cl2 in the presence of pyridine p-toluenesulfonate and freed of acids and H2O with Ca(OH)2 to give 15.7 g 1-(1-ethoxyethoxy)-4-ethenylbenzene, 10.0 g of which was polymd. at -78.degree. for 3 h in THF in the presence of BuLi to give 9.68 g polymer having Mw 19,600 and Mw/Mn 1.04.

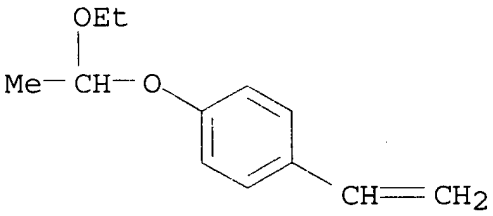
IT **157057-21-1P 243841-13-6P 243841-14-7P 243841-15-8P**
(manuf. of poly[(alkoxyalkoxy)ethenylbenzene] with narrow polydispersity)

RN 157057-21-1 HCA

CN Benzene, 1-ethenyl-4-(1-ethoxyethoxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 157057-20-0
CMF C12 H16 O2

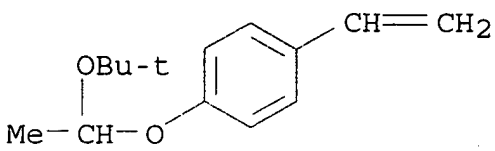


RN 243841-13-6 HCA

CN Benzene, 1-[1-(1,1-dimethylethoxy)ethoxy]-4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

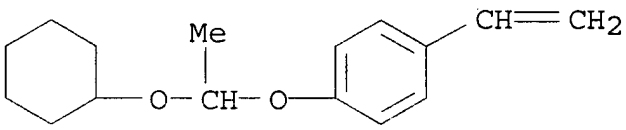
CRN 169811-45-4
CMF C14 H20 O2



RN 243841-14-7 HCA
CN Benzene, 1-[1-(cyclohexyloxy)ethoxy]-4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

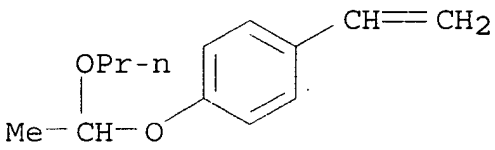
CRN 190434-67-4
CMF C16 H22 O2



RN 243841-15-8 HCA
CN Benzene, 1-ethenyl-4-(1-propoxyethoxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 192314-66-2
CMF C13 H18 O2



IC ICM C08F012-22
ICS C08F004-46; G03F007-039
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 74
ST polyalkoxyalkoxystyrene manuf chem amplified **resist**
IT **Resists**
(pos.-working, chem. amplified; manuf. of poly[(alkoxyalkoxy)ethenylbenzene] with narrow polydispersity for)
IT **157057-21-1P 243841-13-6P 243841-14-7P 243841-15-8P**
(manuf. of poly[(alkoxyalkoxy)ethenylbenzene] with narrow polydispersity)

L37 ANSWER 7 OF 20 HCA COPYRIGHT 2003 ACS on STN
131:229177 Manufacture of poly(p-hydroxystyrene) with narrow polydispersity. Yamamoto, Yoshihiro; Takao, Toshiro; Fukuda, Ritsuko; Ikeda, Keiichi; Hara, Akira (Mitsui Chemicals Inc., Japan). Jpn. Kokai Tokkyo Koho JP 11255820 A2 19990921 Heisei, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-61455 19980312.

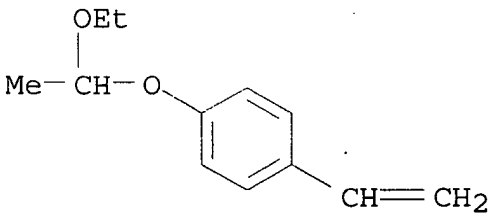
AB 1-(1-Alkoxyalkoxy)-4-ethenylbenzenes H2C:CH-p-C6H4OCH(OR3)CHR1R2 [R1 = H, C1-3 alkyl; R2 = H, C1-6 alkyl, C1-6 alkoxy; R3 = alkoxy-(un)substituted C1-20 alkyl, C5-10 cycloalkyl, C6-20 alkoxy-(un)substituted aryl] are **anionically polymd**. by the use of org. alkali metal compds. or alkali metals as the polymn. initiators to polymers having repeating unit CH2CH-p-C6H4OCH(OR3)CHR1R2 with narrow polydispersity and then dealkoxyalkoxylated by contacting with protonic acids in the presence of org. solvents to give the poly(p-hydroxystyrene) (I), useful for chem. amplified **resists**. Thus, 10.0 g p-hydroxystyrene was treated with 6.13 g Et vinyl ether in CH2Cl2 in the presence of pyridine p-toluenesulfonate and freed of acids and H2O with Ca(OH)2 to give 15.7 g 1-(1-ethoxyethoxy)-4-ethenylbenzene, 10.0 g of which was polymd. at -78.degree. for 3 h in THF in the presence of BuLi to give 9.68 g polymer (II) having Mw 19,600 and Mw/Mn 1.04. Then 5.0 g II was hydrolyzed with HCl in MeOH to give 3.05 g I having Mw 15,500 and Mw/Mn 1.04.

IT **157057-21-1DP**, hydrolyzed **243841-13-6DP**, hydrolyzed **243841-14-7DP**, hydrolyzed **243841-15-8DP**, hydrolyzed
(manuf. of poly(p-hydroxystyrene) with narrow polydispersity)

RN 157057-21-1 HCA
CN Benzene, 1-ethenyl-4-(1-ethoxyethoxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

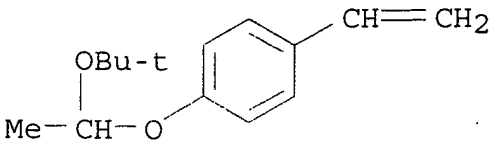
CRN 157057-20-0
CMF C12 H16 O2



RN 243841-13-6 HCA
CN Benzene, 1-[1-(1,1-dimethylethoxy)ethoxy]-4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

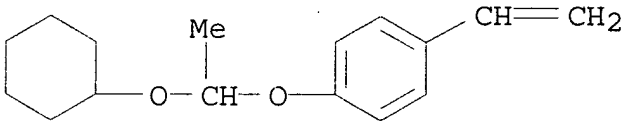
CRN 169811-45-4
CMF C14 H20 O2



RN 243841-14-7 HCA
CN Benzene, 1-[1-(cyclohexyloxy)ethoxy]-4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

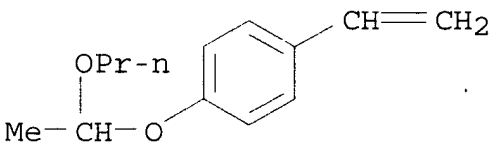
CRN 190434-67-4
CMF C16 H22 O2



RN 243841-15-8 HCA
CN Benzene, 1-ethenyl-4-(1-propoxyethoxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

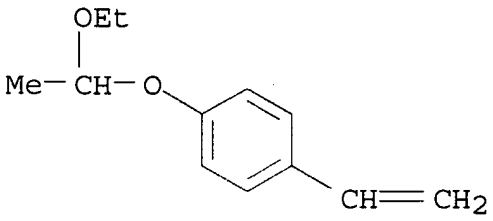
CRN 192314-66-2
CMF C13 H18 O2



IT **157057-21-1P 243841-13-6DP**, hydrolyzed
243841-14-7P 243841-15-8P
(manuf. of poly(p-hydroxystyrene) with narrow polydispersity)
RN 157057-21-1 HCA
CN Benzene, 1-ethenyl-4-(1-ethoxyethoxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

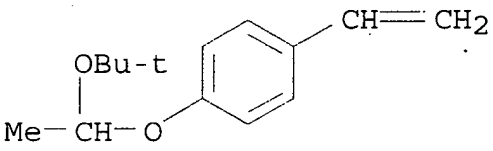
CRN 157057-20-0
CMF C12 H16 O2



RN 243841-13-6 HCA
CN Benzene, 1-[1-(1,1-dimethylethoxy)ethoxy]-4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

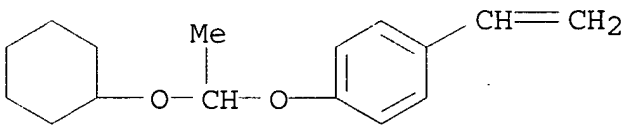
CRN 169811-45-4
CMF C14 H20 O2



RN 243841-14-7 HCA
CN Benzene, 1-[1-(cyclohexyloxy)ethoxy]-4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

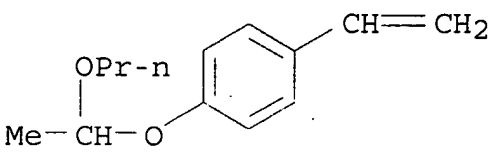
CRN 190434-67-4
CMF C16 H22 O2



RN 243841-15-8 HCA
CN Benzene, 1-ethenyl-4-(1-propoxyethoxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 192314-66-2
CMF C13 H18 O2



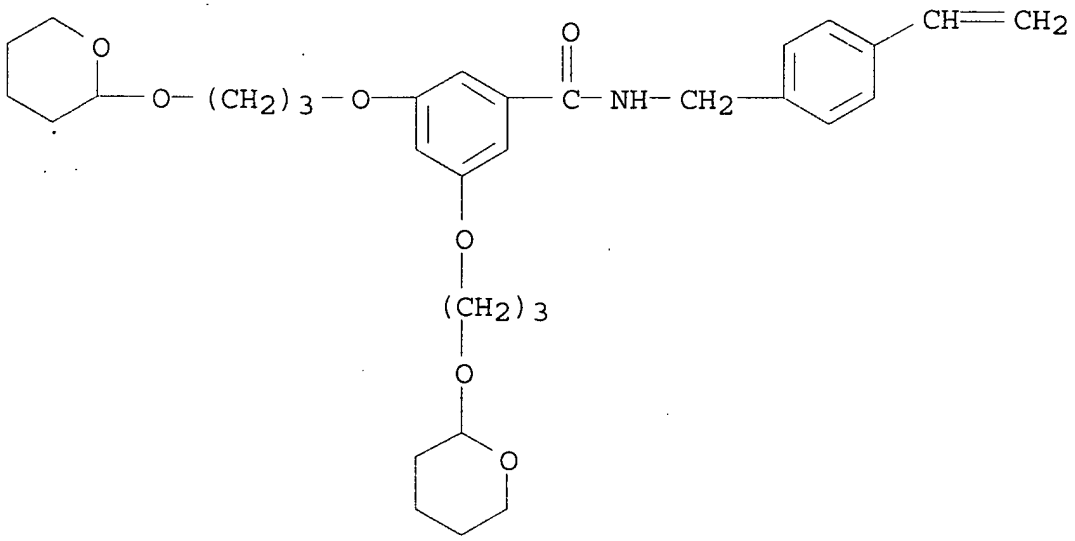
IC ICM C08F008-00
ICS C08F002-06; C08F004-08; C08F004-46; C08F112-14
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 74
ST polyhydroxystyrene prepn polyalkoxyalkoxy styrene hydrolysis; chem amplified **resist** polyhydroxystyrene manuf
IT **Resists**
(chem. amplified; manuf. of poly(p-hydroxystyrene) with narrow polydispersity for)
IT **157057-21-1DP**, hydrolyzed **243841-13-6DP**, hydrolyzed **243841-14-7DP**, hydrolyzed **243841-15-8DP**, hydrolyzed
(manuf. of poly(p-hydroxystyrene) with narrow polydispersity)
IT 157057-20-0P **157057-21-1P** 169811-45-4P 190434-67-4P 192314-66-2P **243841-13-6DP**, hydrolyzed **243841-14-7P** **243841-15-8P**
(manuf. of poly(p-hydroxystyrene) with narrow polydispersity)

L37 ANSWER 8 OF 20 HCA COPYRIGHT 2003 ACS on STN
131:102717 How Dendrons Stiffen Polymer Chains: A SANS Study. Foerster, Stephan; Neubert, Ingo; Schlueter, A. Dieter; Lindner, Peter (Max-Planck-Institut fur Kolloid- und Grenzflachenforschung, Potsdam-Golm, D-14424, Germany). Macromolecules, 32(12), 4043-4049 (English) 1999. CODEN: MAMOBX. ISSN: 0024-9297. Publisher: American Chemical Society.
AB The conformation of various polystyrene chains with first (G-1), second (G-2), and third generation (G-3) Frechet-type dendrons at the repeat unit was studied with small-angle neutron scattering. The increased d. of the attached dendrons leads to a systematically greater cross-sectional chain diam. (D). Bulky, high generation dendrons force the polymer backbone out of its all-trans conformation. The measured statistical Kuhn segment length initially increases in proportion to the chain diam. and then to a greater degree due to steric overcrowding and the concomitantly higher bending rigidity. The introduction of charges further leads to chain expansion and the development of interchain correlations. High mol. wt. (G-2) chains develop fully excluded-vol. chain properties with a Flory exponent of v = 0.57 and a crit. exponent .gamma. = 0.86 which is related to the enhancement of chain configurations with widely sepd. chain ends.
IT **220118-09-2** **220118-09-2D**, **deprotected**
(G-1 dendrimer; chain stiffening by dendron increased d. in higher generation dendrimers studied by SANS)
RN 220118-09-2 HCA

CN Benzamide, N-[(4-ethenylphenyl)methyl]-3,5-bis[3-[(tetrahydro-2H-pyran-2-yl)oxy]propoxy]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

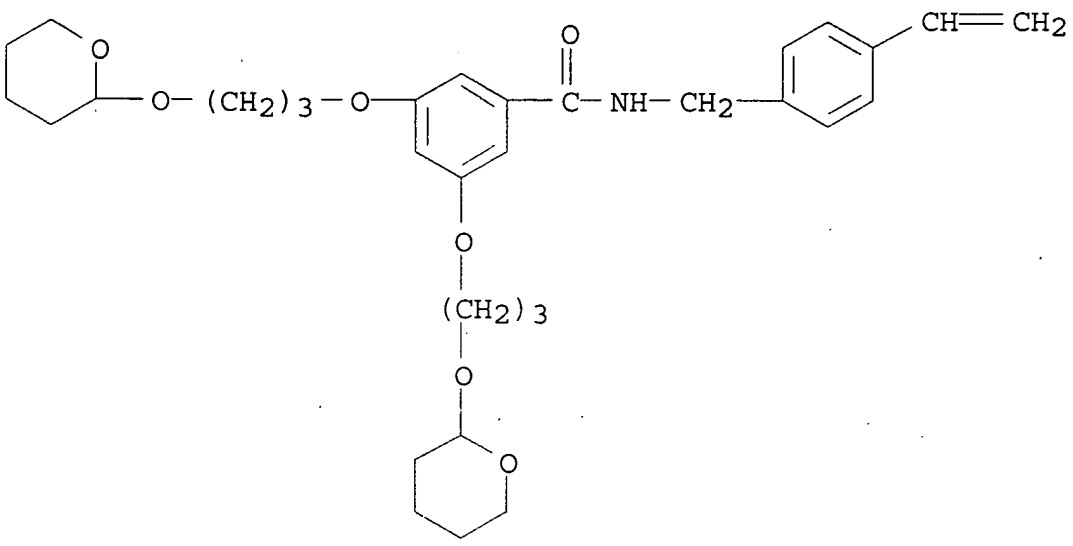
CRN 220118-06-9
CMF C32 H43 N O7



RN 220118-09-2 HCA
CN Benzamide, N-[(4-ethenylphenyl)methyl]-3,5-bis[3-[(tetrahydro-2H-pyran-2-yl)oxy]propoxy]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 220118-06-9
CMF C32 H43 N O7



IT **220118-11-6 220118-11-6D, deprotected**
(G-2 dendrimer; chain stiffening by dendron increased d. in higher generation dendrimers studied by SANS)

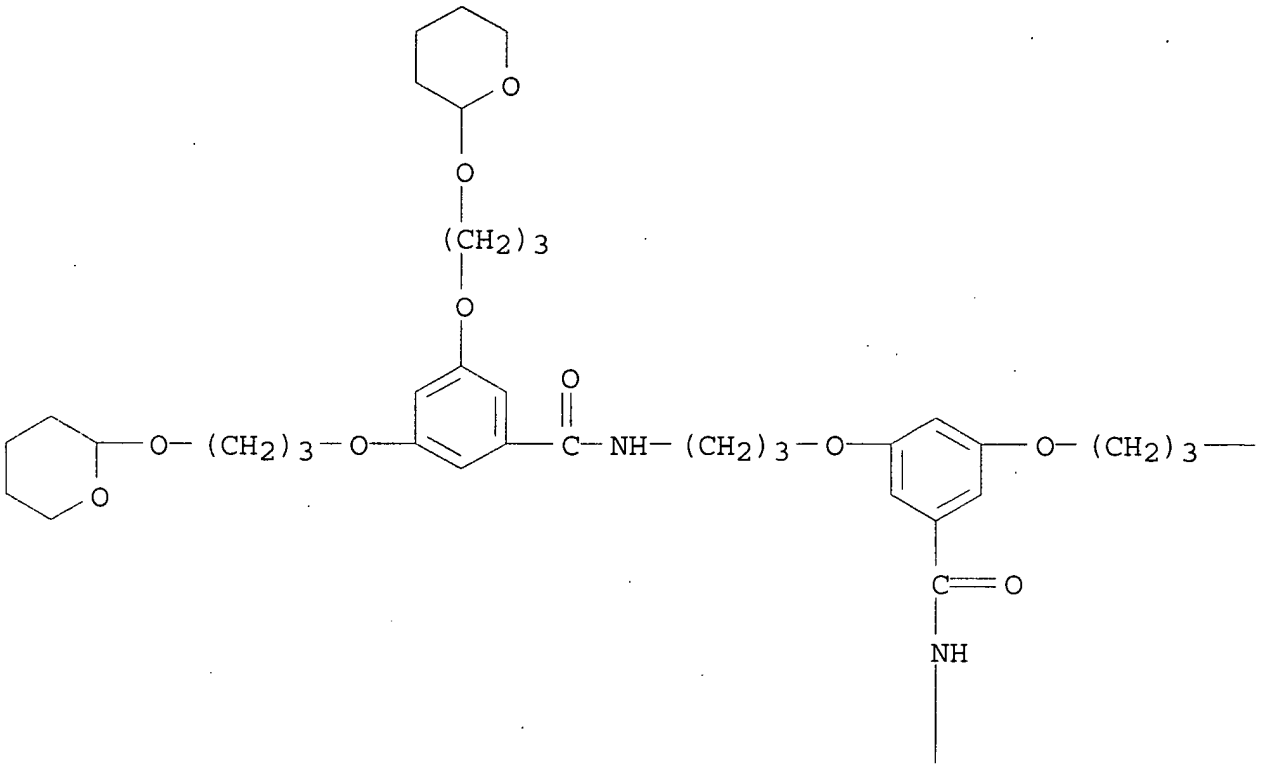
RN 220118-11-6 HCA

CN Benzamide, 3,5-bis[3-[[3,5-bis[3-[(tetrahydro-2H-pyran-2-yl)oxy]propoxy]benzoyl]amino]propoxy]-N-[(4-ethenylphenyl)methyl]-, homopolymer (9CI) (CA INDEX NAME)

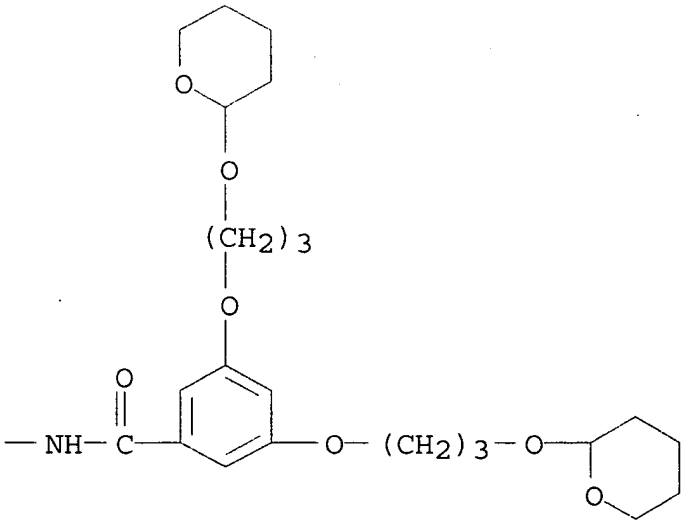
CM 1

CRN 220118-05-8
CMF C68 H93 N3 O17

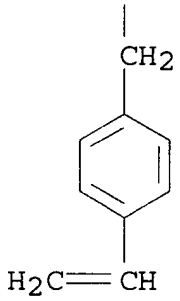
PAGE 1-A



PAGE 1-B



PAGE 2-A

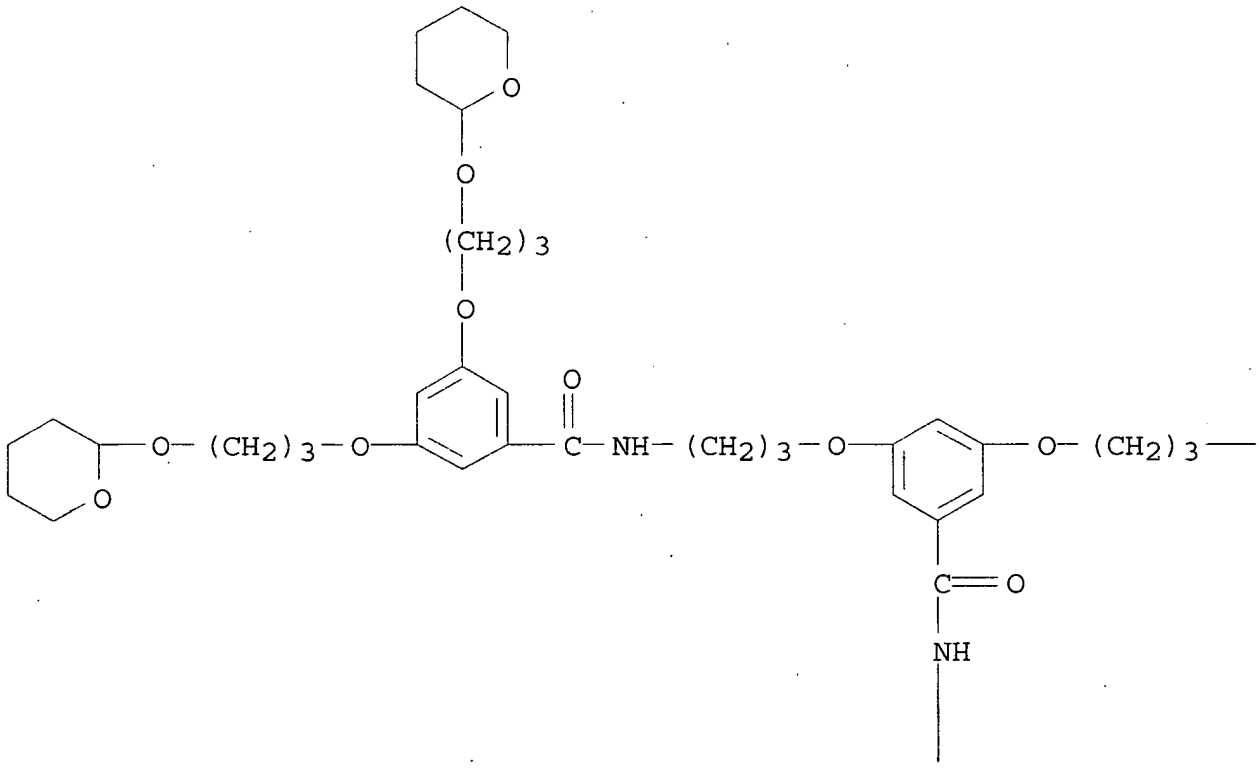


RN 220118-11-6 HCA
CN Benzamide, 3,5-bis[3-[[3,5-bis[3-[(tetrahydro-2H-pyran-2-yl)oxy]propoxy]benzoyl]amino]propoxy]-N-[(4-ethenylphenyl)methyl]-, homopolymer (9CI) (CA INDEX NAME)

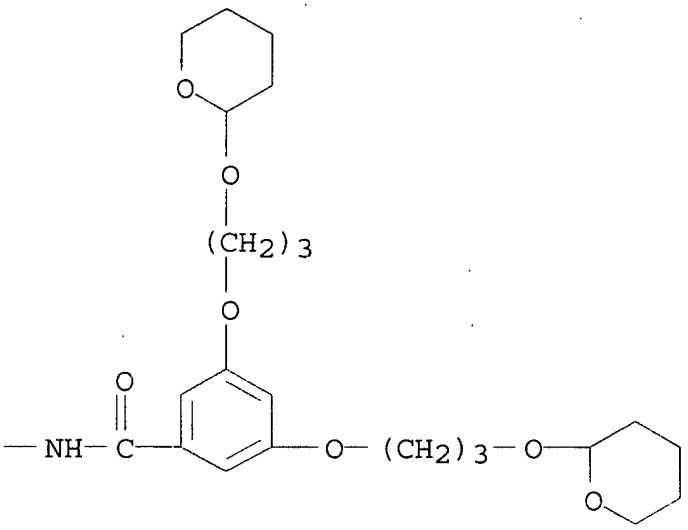
CM 1

CRN 220118-05-8
CMF C68 H93 N3 O17

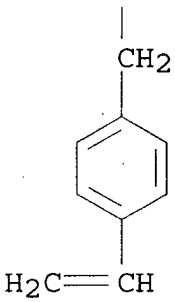
PAGE 1-A



PAGE 1-B



PAGE 2-A



CC 36-2 (Physical Properties of Synthetic High Polymers)
IT 181365-18-4 **220118-09-2 220118-09-2D, deprotected** 220118-10-5
(G-1 dendrimer; chain stiffening by dendron increased d. in higher generation dendrimers studied by SANS)
IT 181365-20-8 220118-03-6 **220118-11-6 220118-11-6D, deprotected**
(G-2 dendrimer; chain stiffening by dendron increased d. in higher generation dendrimers studied by SANS)

L37 ANSWER 9 OF 20 HCA COPYRIGHT 2003 ACS on STN
130:139723 Dendronized Polystyrenes with Hydroxy and Amino Groups in the Periphery. Neubert, Ingo; Schlueter, A. Dieter (Institut fuer Organische Chemie, Freie Universitaet Berlin, Berlin, 14195,

Germany). Macromolecules, 31(26), 9372-9378 (English) 1998. CODEN: MAMOBX. ISSN: 0024-9297. Publisher: American Chemical Society.

AB The authors report (a) the synthesis of new amino-terminated dendrons with orthogonally protected functional groups at the focal point (Me ester) and in the periphery (trimethylsilylethoxycarbonyl), (b) their attachment to a styrene deriv. as well as that of previously reported dendrons to yield polymerizable (dendritic macromonomers), (c) the polymn. of the obtained monomers under high concn. conditions, and (d) the **deprotection** of the resulting polymers at their peripheral functional groups.

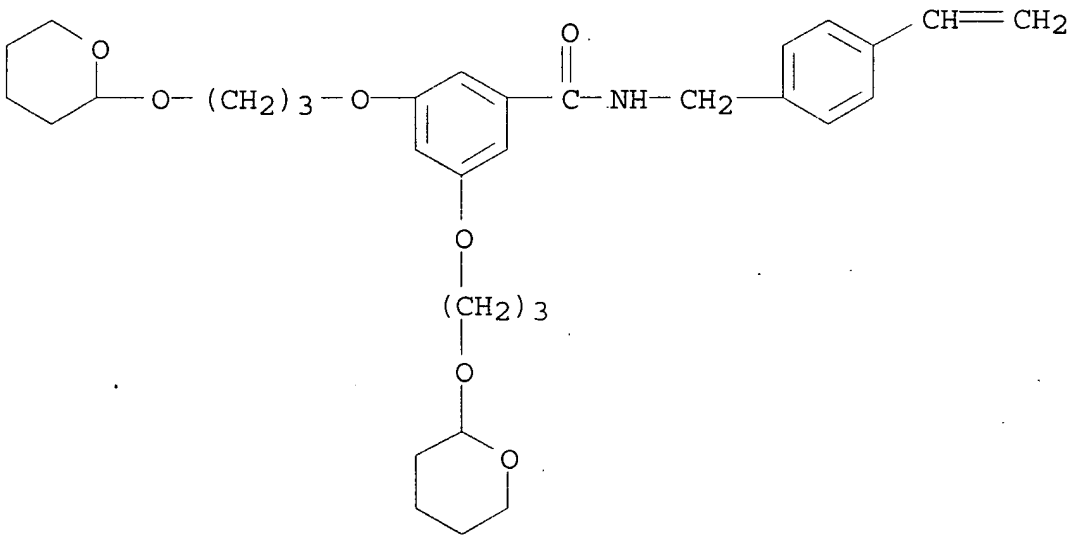
IT **220118-09-2DP, deprotected 220118-09-2P**
(G1-contg. polystyrene; synthesis of dendronized polystyrenes with hydroxy and amino groups in the periphery)

RN 220118-09-2 HCA

CN Benzamide, N-[(4-ethenylphenyl)methyl]-3,5-bis[3-[(tetrahydro-2H-pyran-2-yl)oxy]propoxy]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 220118-06-9
CMF C32 H43 N O7

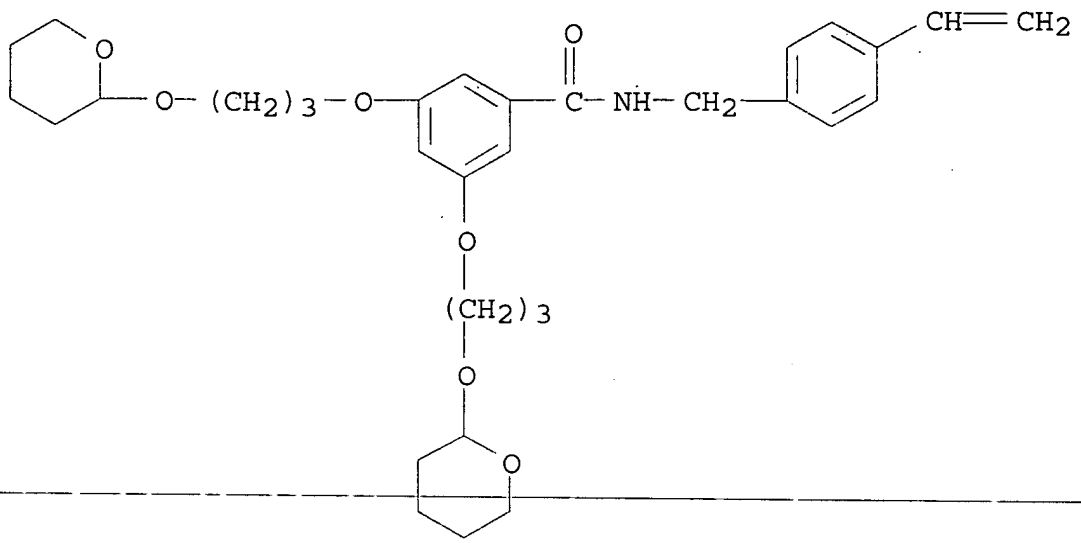


RN 220118-09-2 HCA

CN Benzamide, N-[(4-ethenylphenyl)methyl]-3,5-bis[3-[(tetrahydro-2H-pyran-2-yl)oxy]propoxy]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 220118-06-9
CMF C32 H43 N O7



IT **220118-11-6DP**, **deprotected**, trifluoroacetic acid compd. **220118-11-6P**
(G2-contg. polystyrene; synthesis of dendronized polystyrenes with hydroxy and amino groups in the periphery)

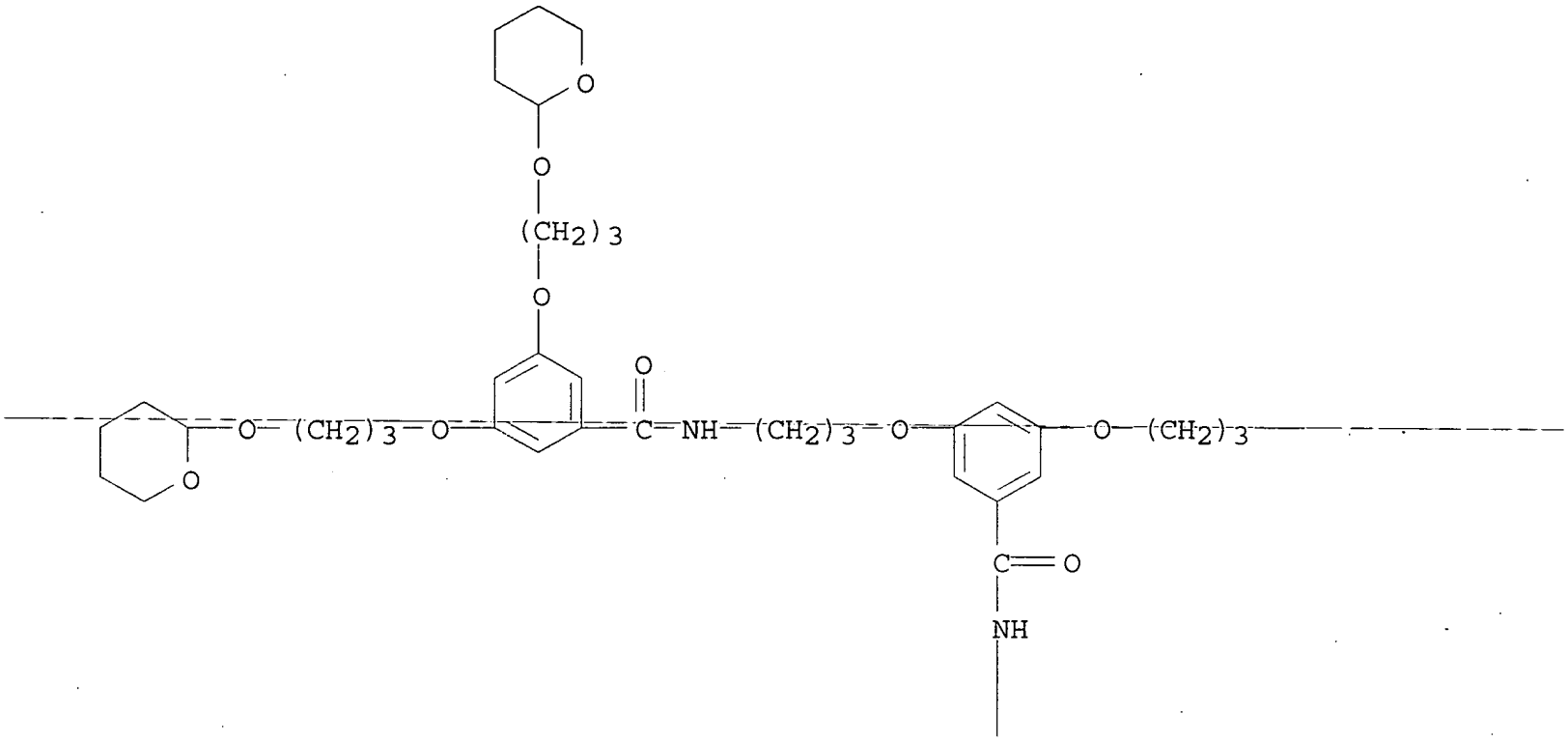
RN 220118-11-6 HCA

CN Benzamide, 3,5-bis[3-[[3,5-bis[3-[(tetrahydro-2H-pyran-2-yl)oxy]propoxy]benzoyl]amino]propoxy]-N-[(4-ethenylphenyl)methyl]-, homopolymer (9CI) (CA INDEX NAME)

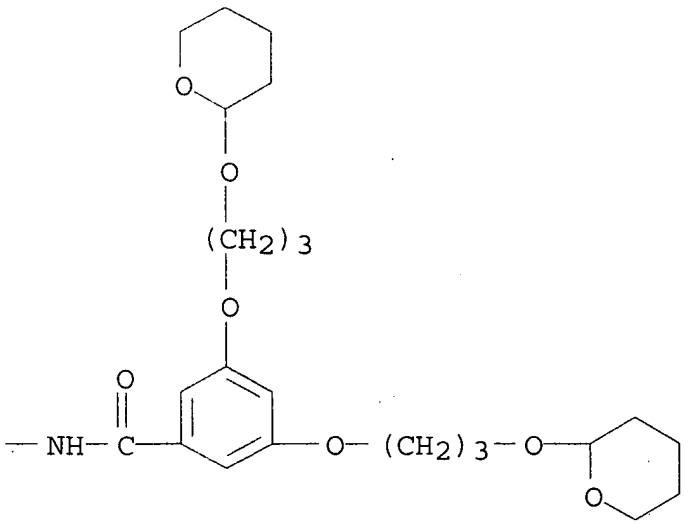
CM 1

CRN 220118-05-8
CMF C68 H93 N3 O17

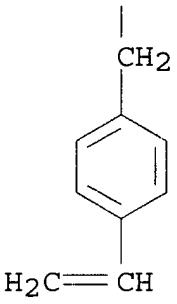
PAGE 1-A



PAGE 1-B



PAGE 2-A

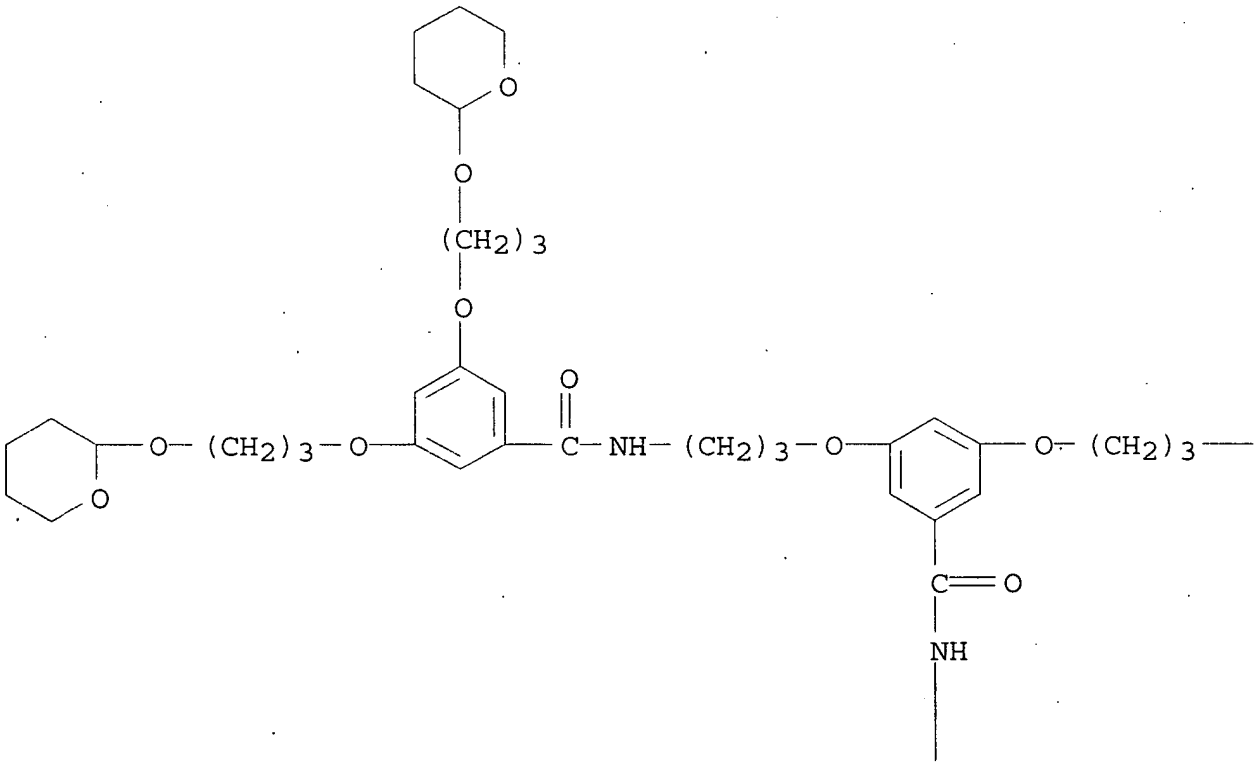


RN 220118-11-6 HCA
CN Benzamide, 3,5-bis[3-[[3,5-bis[3-[(tetrahydro-2H-pyran-2-yl)oxy]propoxy]benzoyl]amino]propoxy]-N-[(4-ethenylphenyl)methyl]-, homopolymer (9CI) (CA INDEX NAME)

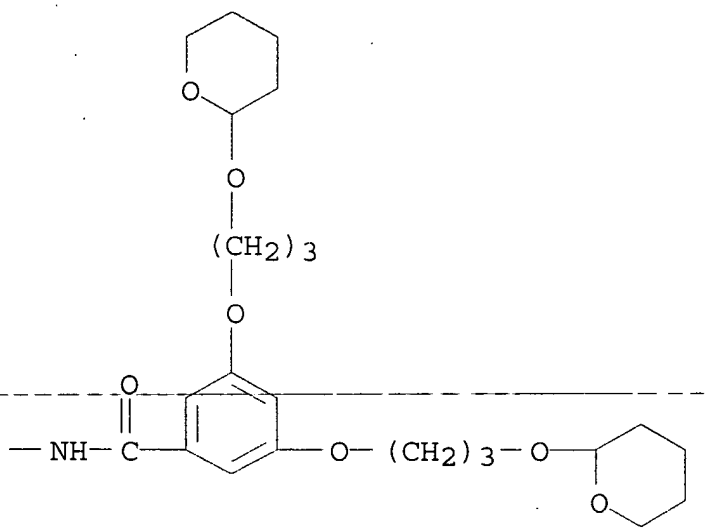
CM 1

CRN 220118-05-8
CMF C68 H93 N3 O17

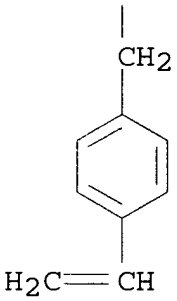
PAGE 1-A



PAGE 1-B



PAGE 2-A



CC 35-7 (Chemistry of Synthetic High Polymers)

IT **220118-09-2DP**, **deprotected 220118-09-2P**
220118-10-5DP, **deprotected** 220118-10-5P
(G1-contg. polystyrene; synthesis of dendronized polystyrenes with hydroxy and amino groups in the periphery)

IT **220118-11-6DP**, **deprotected**, trifluoroacetic acid compd. **220118-11-6P** 220118-12-7DP, **deprotected**, trifluoroacetic acid compd. 220118-12-7P
(G2-contg. polystyrene; synthesis of dendronized polystyrenes with hydroxy and amino groups in the periphery)

IT 7647-01-0, Hydrochloric acid, uses
(amino or hydroxy group **deprotection** catalyst; synthesis of dendronized polystyrenes with hydroxy and amino groups in the periphery)

L37 ANSWER 10 OF 20 HCA COPYRIGHT 2003 ACS on STN
130:52822 Poly[1-(1-alkoxyethoxy)-4-(1-methylethenyl)benzene] with narrow polydispersity and its manufacture. Yamamoto, Yoshihiro; Takao, Toshiro; Fukuta, Tatsuko; Hara, Akira (Mitsui Chemicals Inc., Japan). Jpn. Kokai Tokkyo Koho JP 10306121 A2 19981117 Heisei, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-31440 19980213. PRIORITY: JP 1997-49030 19970304.

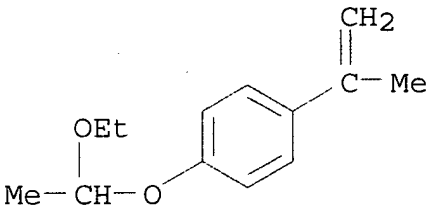
AB The polymer useful for chem. amplifiable pos.-working **resist**, has wt.-av. mol. wt. (Mw) of 2000-100,000, and polydispersity (Mw/Mn) <1.6, is manufd. by the **anionic polymn.** of 1-(alkoxyethoxy)-4-(1-methylethenyl)benzene (I) using org. alkali metal compds. as polymn. initiators where the I can be prepd. by the reaction of 4-(1-methylethenyl)phenol (II) with alkyl vinyl ether in the presence of acid catalysts. Thus, reacting II with Et vinyl ether in CH2Cl2 in the presence of p-toluenesulfonic acid pyridine salt gave 1-(1-ethoxyethoxy)-4-(1-methylethenyl)benzene (I). Polymg. I in the presence of sec-Bu lithium in THF gave a polymer with narrow polydispersity.

IT **216573-41-0P 216573-46-5P**
(manuf. of poly[1-(1-alkoxyethoxy)-4-(1-methylethenyl)benzene] with narrow polydispersity)

RN 216573-41-0 HCA
CN Benzene, 1-(1-ethoxyethoxy)-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

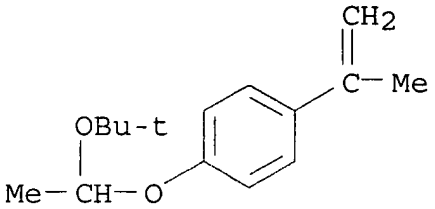
CRN 216573-39-6
CMF C13 H18 O2



RN 216573-46-5 HCA
CN Benzene, 1-[1-(1,1-dimethylethoxy)ethoxy]-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 216573-44-3
CMF C15 H22 O2



IC ICM C08F012-22
ICS C08F004-46; G03F007-039
CC 35-4 (Chemistry of Synthetic High Polymers)
ST alkoxyethoxy methylethenylbenzene polymer narrow polydispersity; pos **resist** methylethenylbenzene polymer narrow polydispersity
IT **Polymerization**
(**anionic**; poly[1-(1-alkoxyethoxy)-4-(1-methylethenyl)benzene] with narrow polydispersity and manuf.)
IT **Resists**
(poly[1-(1-alkoxyethoxy)-4-(1-methylethenyl)benzene] with narrow polydispersity and manuf.)
IT **216573-41-0P 216573-46-5P**
(manuf. of poly[1-(1-alkoxyethoxy)-4-(1-methylethenyl)benzene] with narrow polydispersity)

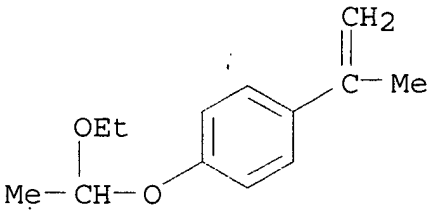
L37 ANSWER 11 OF 20 HCA COPYRIGHT 2003 ACS on STN
130:38804 Manufacture of poly(p-hydroxy-.alpha.-methylstyrene) with narrow molecular-weight distribution using specific **anionic polymerization** initiators for chemically amplified **resists**. Yamamoto, Yoshihiro; Takao, Toshiro; Fukuta, Tatsuko; Hara, Akira (Mitsui Chemicals Inc., Japan). Jpn. Kokai Tokkyo Koho JP 10310609 A2 19981124 Heisei, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-122141 19970513.
AB H[CMe(C6H4OH-4)CH2]n[CH2CMeC6H4OH-4]mH (m, n = 10-500) with Mw 1000-80,000 and Mw/Mn .ltoreq.1.5 are manufd. by reacting p-hydroxy-.alpha.-methylstyrene with R1R2C:CHOR3 [R1 = H, C1-3 alkyl; R2 = H, C1-6 alkyl, C1-6 alkoxy; R3 = C1-20 (alkoxy)alkyl, C5-10 cycloalkyl, C6-20 (alkoxy)aryl; R2R3 may form ring] in the presence of acids, **anionic polymn**. of the resulting 4-H2C:CMeC6H4OCH(OR3)CHR1R2 (R1-R3 = same as above) using MAr (Ar = naphthalene, anthracene, indene, cyclopentadiene, fluorene; M = Li, Na, K, Cs) as polymn. initiators, and **deprotection** of the obtained polymers by protonic acids in the presence of org. solvents. 4-H2C:CMeC6H4OCHMeOEt was polymd. in the presence of Na naphthalene at -20.degree. for 3 h to give the corresponding homopolymer with 82.4% yield, which was reacted with aq. HCl at room temp. for 3 h in MeOH. Poly(p-hydroxy-.alpha.-methylstyrene) with Mw 18,500 and Mw/Mn 1.08 was obtained.
IT **216573-41-0P 216573-46-5P**
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
RN 216573-41-0 HCA

=6281318

CN Benzene, 1-(1-ethoxyethoxy)-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

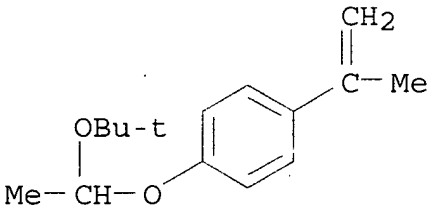
CRN 216573-39-6
CMF C13 H18 O2



RN 216573-46-5 HCA
CN Benzene, 1-[1-(1,1-dimethylethoxy)ethoxy]-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

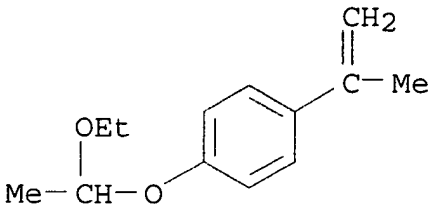
CRN 216573-44-3
CMF C15 H22 O2



IT **216573-41-0DP, deprotected 216573-46-5DP , deprotected**
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
RN 216573-41-0 HCA
CN Benzene, 1-(1-ethoxyethoxy)-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

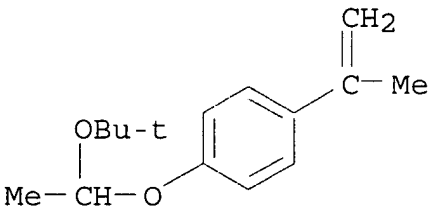
CRN 216573-39-6
CMF C13 H18 O2



RN 216573-46-5 HCA
CN Benzene, 1-[1-(1,1-dimethylethoxy)ethoxy]-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 216573-44-3
CMF C15 H22 O2



IC ICM C08F012-24
ICS C08F002-00; C08F008-00
CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 25, 67, 74
ST polyhydroxymethylstyrene manuf chem amplified **resists**; mol wt distribution narrow polyhydroxymethylstyrene manuf; **anionic polymn** initiator organometallic compd methylstyrene; alkoxyalkylation protection hydroxymethylstyrene vinyl ether; sodium naphthalene **anionic polymn** initiator hydroxymethylstyrene
IT Protective groups
(alkoxyalkyl; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT **Polymerization** catalysts
(**anionic**, organometallic compds.; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT Etherification
(by vinyl ethers; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT Molecular weight distribution
Resists

(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)

IT Alkali metal compounds
(salts with arom. compds., **anionic polymn.** initiators; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)

IT 3481-12-7, Sodium naphthalene, uses 34475-54-2, Potassium anthracene, uses
(**anionic polymn.** initiator; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)

IT 86-73-7D, Fluorene, alkali metal salts 95-13-6D, Indene, alkali metal salts 542-92-7D, Cyclopentadiene, alkali metal salts 7439-93-2D, Lithium, salts with arom. compds., uses 7440-46-2D, Cesium, salts with arom. compds., uses
(**anionic polymn.** initiators; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)

IT 214531-14-3P **216573-41-0P 216573-46-5P**
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)

IT 214531-14-3DP, **deprotected 216573-41-0DP**, **deprotected 216573-46-5DP**, **deprotected**
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)

IT 214531-13-2P 216573-39-6P 216573-44-3P
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)

IT 4286-23-1, p-Hydroxy-.alpha.-methylstyrene
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)

IT 107-25-5, Methyl vinyl ether 109-92-2, Ethyl vinyl ether 111-34-2, Butyl vinyl ether 764-47-6, Propyl vinyl ether 926-02-3, tert-Butyl vinyl ether 926-65-8, Iso-propyl vinyl ether 1191-99-7, 2,3-Dihydrofuran 1888-85-3, sec-Butyl vinyl ether 29281-39-8, tert-Amyl vinyl ether
(protection by; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)

L37 ANSWER 12 OF 20 HCA COPYRIGHT 2003 ACS on STN

130:14338 Manufacture of poly(p-hydroxy-.alpha.-methylstyrene) with narrow molecular-weight distribution using specific **anionic polymerization** initiators for chemically amplified **resists**. Yamamoto, Yoshihiro; Takao, Toshiro; Fukuda, Tatsuko; Hara, Akira (Mitsui Chemicals Inc., Japan). Jpn. Kokai Tokkyo Koho JP 10298235 A2 19981110 Heisei, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-104720 19970422.

AB The polymers having structure repeating units of [CH2CMeC6H4OH-4] are manufd. by reacting p-hydroxy-.alpha.-methylstyrene with R1R2C:CHOR3 [R1 = H, C1-3 alkyl; R2 = H, C1-6 alkyl, C1-6 alkoxy; R3

= 6281316

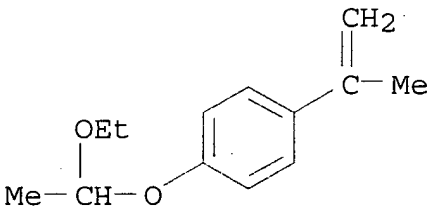
= C1-20 (alkoxy)alkyl, C5-10 cycloalkyl, C6-20 (alkoxy)aryl; R2R3 may form ring] in the presence of acids, **anionic polymn.** of the resulting 4-H2C:CMeC6H4OCH(OR3)CHR1R2 (R1-R3 = same as above) using MCR4R5R6 (R4, R5 = C1-10 alkyl, C7-11 aralkyl; R6 = H, C1-10 alkyl; M = Li, Na, K, Cs), R7(CH2CR8C6H4R9-4)lM (R7 = H, C1-10 alkyl; R8 = C1-3 alkyl, C6-11 aryl; R9 = H, C1-10 alkyl, alkoxy, alkoxyalkoxy; M = same as above), or M[CR10(C6H4R9-4)CH2]n(CH2CR10C6H4R9-4)mM (R9, M = same as above; R10 = C1-3 alkyl; m, n = 1-100) as polymn. initiators, and **deprotection** of the obtained polymers by protonic acids in the presence of org. solvents. 4-H2C:CMeC6H4OCHMeOEt was polymd. in the presence of EtCHMeLi at -78.degree. for 6 h to give the corresponding homopolymer, which was reacted with aq. HCl at room temp. for 3 h in MeOH. Poly(p-hydroxy-.alpha.-methylstyrene) with Mw 14,000 and Mw/Mn 1.02 was obtained.

IT **216573-41-0P 216573-46-5P**
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)

RN 216573-41-0 HCA
CN Benzene, 1-(1-ethoxyethoxy)-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

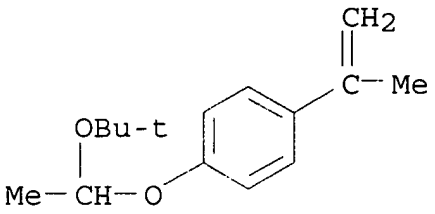
CRN 216573-39-6
CMF C13 H18 O2



RN 216573-46-5 HCA
CN Benzene, 1-[1-(1,1-dimethylethoxy)ethoxy]-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

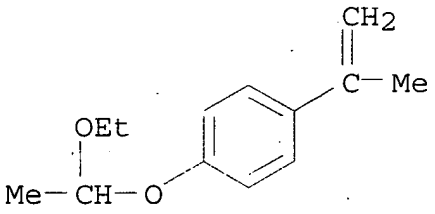
CRN 216573-44-3
CMF C15 H22 O2



IT **216573-41-0DP, deprotected 216573-46-5DP , deprotected**
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
RN 216573-41-0 HCA
CN Benzene, 1-(1-ethoxyethoxy)-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

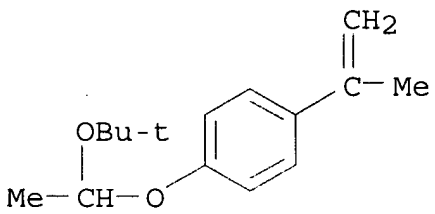
CRN 216573-39-6
CMF C13 H18 O2



RN 216573-46-5 HCA
CN Benzene, 1-[1-(1,1-dimethylethoxy)ethoxy]-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 216573-44-3
CMF C15 H22 O2



IC ICM C08F012-22
ICS C08F004-46; C08F008-12; C08F012-24

CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 25, 67, 74
ST polyhydroxymethylstyrene manuf chem amplified **resists**; mol wt distribution narrow polyhydroxymethylstyrene manuf; **anionic polymn** initiator organometallic compd methylstyrene; alkoxyalkylation protection hydroxymethylstyrene vinyl ether; butyllithium **anionic polymn** initiator polyhydroxymethylstyrene manuf
IT Protective groups
(alkoxyalkyl; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT Alkali metal compounds
(**anionic polymn**. initiators; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT **Polymerization** catalysts
(**anionic**, organometallic compds.; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT Etherification
(by vinyl ethers; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT Molecular weight distribution
Resists
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT 598-30-1, sec-Butyllithium 3003-91-6, Cumyl potassium 23248-64-8 40999-41-5 52434-87-4, Cumyl cesium
(**anionic polymn**. initiator; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT 214531-14-3P **216573-41-0P 216573-46-5P**
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT 214531-14-3DP, **deprotected 216573-41-0DP, deprotected 216573-46-5DP, deprotected**
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT 214531-13-2P 216573-39-6P 216573-44-3P
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT 4286-23-1, p-Hydroxy-.alpha.-methylstyrene
(manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified **resists**)
IT 107-25-5, Methyl vinyl ether 109-92-2 111-34-2 764-47-6, Propyl vinyl ether 926-02-3, tert-Butyl vinyl ether 926-65-8, Iso-propyl vinyl ether 1191-99-7, 2,3-Dihydrofuran 1888-85-3, sec-Butyl vinyl ether 29281-39-8
(protection by; manuf. of poly(p-hydroxy-.alpha.-methylstyrene) with narrow mol.-wt. distribution for chem. amplified

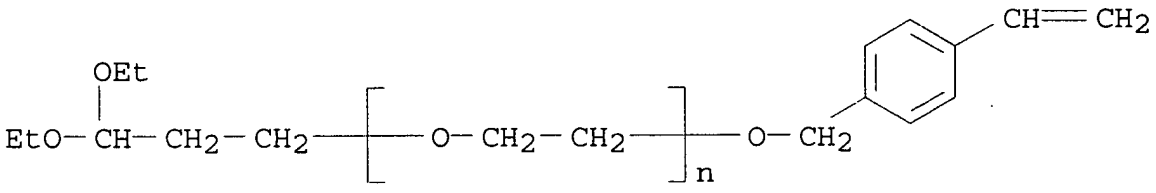
resists)

L37 ANSWER 13 OF 20 HCA COPYRIGHT 2003 ACS on STN
128:180919 Monodisperse Polystyrene Latex Particles Functionalized by the Macromonomer Technique. Bucsi, Alexander; Forcada, Jacqueline; Gibanel, Sebastien; Heroguez, Valerie; Fontanille, Michel; Gnanou, Yves (Grupo de Ingenieria Quimica Departamento de Quimica Aplicada Facultad de Ciencias Quimicas, Universidad del Pais Vasco/EHU, San Sebastian, 20080, Spain). Macromolecules, 31(7), 2087-2097 (English) 1998. CODEN: MAMOBX. ISSN: 0024-9297. Publisher: American Chemical Society.

AB Monodisperse core-shell latex particles functionalized with surface groups that were introduced by the macromonomer technique were obtained by means of a two-step emulsion polymn. process in a batch reactor at 70 .degree.C. In the first step the cores were synthesized by means of a batch emulsion polymn. of styrene (St), and in the second step, the shells were formed by batch emulsion copolymns. of St and different macromonomers using the seeds obtained previously. Macromonomers were synthesized by **anionic "living" polymn**. They are constituted of a poly(ethylene oxide) hydrophilic block and a hydrophobic block or sequence end-fitted with an unsatn. The latexes were characterized by gravimetry, transmission electron microscopy (TEM), and conductometric titrns. to obtain the conversion, the particle size distribution (PSD), and the surface charge d. (.sigma.), resp. The colloidal stability of the cores and final latexes were detd. by measuring the crit. coagulation concn. (CCC) at two pHs (7 and 2) using KBr as electrolyte. The surface charges of the latexes were moderately low, with corresponding moderately low CCCs. The presence of spacers, confirmed with a disk centrifuge photosedimentometer (DCP) and photon correlation spectrophotometer (PCS), did not increase the CCC. During the CCC measurements, at high electrolyte concns., the reduced soly. of the spacer PEO moiety in the soln. resulted in its collapse on the particle surface.

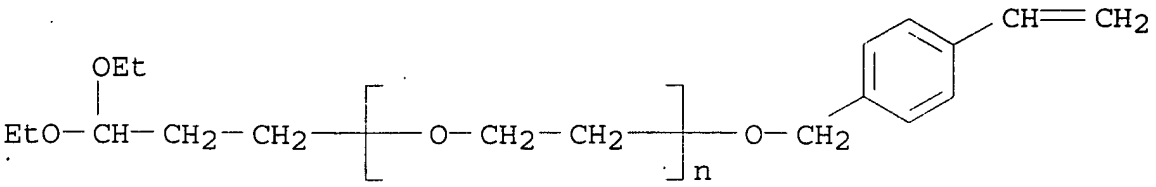
IT **198570-13-7DP**, aldehyde group-contg. **198570-13-7P**
(macromonomer; prepn. of monodisperse polystyrene latex particles functionalized by the macromonomer technique)

RN 198570-13-7 HCA
CN Poly(oxy-1,2-ethanediyl), .alpha.-(3,3-diethoxypropyl)-.omega.-[(4-ethenylphenyl)methoxy]- (9CI) (CA INDEX NAME)



RN 198570-13-7 HCA
CN Poly(oxy-1,2-ethanediyl), .alpha.-(3,3-diethoxypropyl)-.omega.-[(4-

ethenylphenyl)methoxy]- (9CI) (CA INDEX NAME)



CC 37-3 (Plastics Manufacture and Processing)

ST functionalized core shell latex particle prepn; batch emulsion polymn latex particle synthesis; macromonomer functionalization polystyrene seed latex; surface charge monodisperse polystyrene latex particle; **anionic living polymn** macromonomer synthesis; electrokinetic property polystyrene core shell latex; acetal group transformation polyoxyethylene macromonomer; colloidal stability functionalized polystyrene latex

IT **Polymerization**
Polymerization
(**anionic**, **living**; macromonomer synthesis by)

IT 9003-53-6DP, Polystyrene, hydroxyl- and p-ethenylphenyl group-terminated 25322-68-3DP, .alpha.-3,3-diethoxypropyl-.omega.-styryl-terminated 107311-90-0DP, Ethylene oxide-styrene block copolymer, aldehyde- and p-ethenylphenyl group-terminated **198570-13-7DP**, aldehyde group-contg. **198570-13-7P**
(macromonomer; prepn. of monodisperse polystyrene latex particles functionalized by the macromonomer technique)

L37 ANSWER 14 OF 20 HCA COPYRIGHT 2003 ACS on STN

128:128334 Synthesis of a Well-Defined Glycopolymer by Nitroxide-Controlled Free Radical Polymerization. Ohno, Kohji; Tsujii, Yoshinobu; Miyamoto, Takeaki; Fukuda, Takeshi; Goto, Mitsuaki; Kobayashi, Kazukiyo; Akaike, Toshihiro (Institute for Chemical Research, Kyoto University, Uji, 611, Japan). Macromolecules, 31(4), 1064-1069 (English) 1998. CODEN: MAMOBX. ISSN: 0024-9297. Publisher: American Chemical Society.

AB This is the first report of the synthesis of a well-defined glycopolymer by free radical polymn. N-(p-vinylbenzyl)-[O-b-D-galactopyranosyl-(1.fwdarw.4)]-D-gluconamide (VLA), a styrene deriv. with an oligosaccharide moiety, was polymd. in N,N-dimethylformamide soln. at 90 .degree.C by the nitroxide-mediated free radical polymn. technique. Acetylated VLA gave polymers with a mol. wt. from about 2000 to 40 000, an Mw/Mn ratio of about 1.1 in all cases, and a conversion of up to about 90%, where Mw and Mn are the wt.- and no.-av. mol. wts. Indispensable for this success were (1) the use of di-tert-Bu nitroxide (DBN) rather than other nitroxides such as TEMPO, (2) the acetylation of VLA, and (3) the use of a radical initiator DCP (dicumyl peroxide) as an accelerator. DBN provided a well-controlled polymn. of VLA at 90 .degree.C (VLA becomes unstable at higher temps., e.g., >120 .degree.C). The acetylation effectively prevented the chain transfer that leads to dead polymers

and broad polydispersities. DCP remarkably accelerated the rate of polymn. (the rate of chain extension), which otherwise was impractically slow, without causing any appreciable broadening of polydispersity.

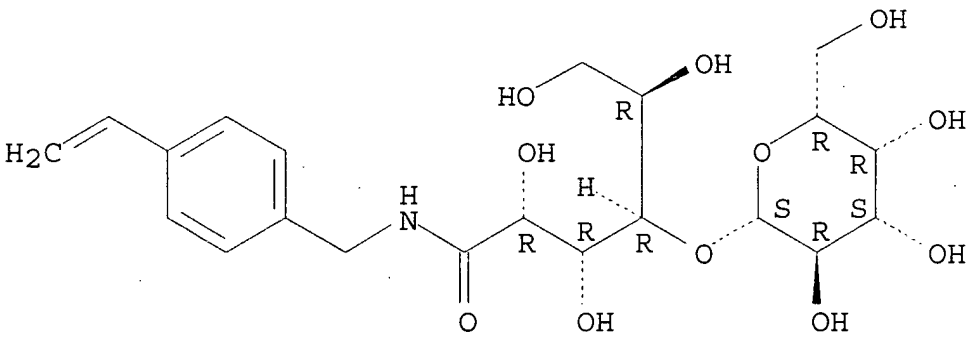
IT **96910-25-7P 201863-24-3P**
(synthesis of a well-defined polystyrene-type glycopolymer by nitroxide-controlled free radical polymn.)

RN 96910-25-7 HCA
CN D-Gluconamide, N-[(4-ethenylphenyl)methyl]-4-O-.beta.-D-galactopyranosyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 96886-53-2
CMF C21 H31 N O11

Absolute stereochemistry.

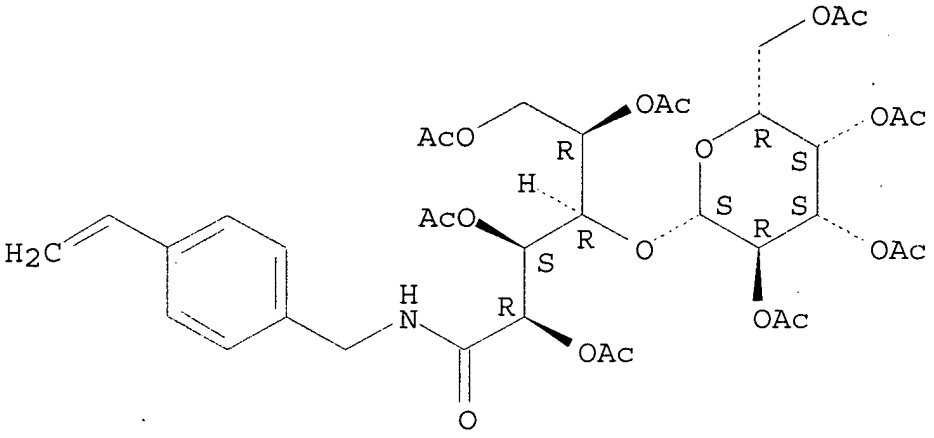


RN 201863-24-3 HCA
CN D-Gluconamide, N-[(4-ethenylphenyl)methyl]-4-O-(2,3,4,5-tetra-O-acetyl-.beta.-D-galactopyranosyl)-, 2,3,5,6-tetraacetate, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 201863-22-1
CMF C37 H47 N O19

Absolute stereochemistry.



CC 35-4 (Chemistry of Synthetic High Polymers)
ST living nitroxide mediated vinylbenzylgalactopyranosyl gluconamide polymn; radical **living polymn** vinylbenzyl galactopyranosyl gluconamide; narrow polydispersity oligosaccharide pendant polystyrene synthesis
IT **Polymerization**
Polymerization
(**living**, radical; synthesis of a well-defined polystyrene-type glycopolymer by nitroxide-controlled free radical polymn.)
IT **96910-25-7P 201863-24-3P**
(synthesis of a well-defined polystyrene-type glycopolymer by nitroxide-controlled free radical polymn.)

L37 ANSWER 15 OF 20 HCA COPYRIGHT 2003 ACS on STN
126:234980 A New Type of Artificial Glycoconjugate Polymer: A Convenient Synthesis and Its Interaction with Lectins. Kobayashi, Kazukiyo; Tsuchida, Akiko; Usui, Taichi; Akaike, Toshihiro (Graduate School of Engineering, Nagoya University, Nagoya, 464-01, Japan). Macromolecules, 30(7), 2016-2020 (English) 1997. CODEN: MAMOBX. ISSN: 0024-9297. Publisher: American Chemical Society.
AB A convenient synthetic route to a new type of artificial glycoconjugate polymer has been designed to develop biomedical materials using oligosaccharide moieties as recognition signals. An amino function was introduced to the reducing end of lactose and N,N'-diacetylchitobiose with ammonium hydrogen carbonate and then was allowed to react with p-vinylbenzoyl chloride. The N-glycosidation proceeded stereospecifically in one flask to give only the .beta.-glycoside without any protection and **deprotection** steps. The resulting p-vinylbenzamide glycoside derivs. were homo- and copolymd. with acrylamide using 2,2'-azobisisobutyronitrile as initiator in DMSO at 60.degree.. The interaction of the glycopolymers with lectins was investigated by means of a two-dimensional immunodiffusion test in agar and inhibition of the hemagglutinating activity. The specificity of

lectins with these glycopolymers was similar to that reported for naturally-occurring glycoconjugates. Binding between wheat germ agglutinin lectin (WGA) and poly((p-vinylbenzamido)-.beta.-diacetylchitobiose) was increased by 103 times compared with that of the oligosaccharide itself. The enhancement was attributed to the presence of the hydrophobic Ph aglycon as well as the high d., multiantennary disaccharide ligands along the polymer chain. The present synthetic method is useful to introduce biol. important, complex oligosaccharides into glycopolymers.

IT **174339-78-7P**
(synthesis of poly (p-vinylbenzamido)-.beta.-diacetylchitobiose and its interaction with lectins for hemagglutination inhibition assays.)

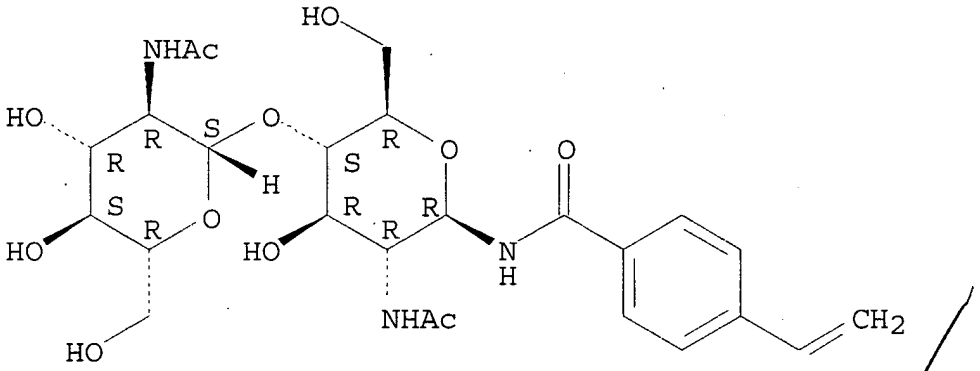
RN 174339-78-7 HCA

CN Benzamide, N-[2-(acetylamino)-4-O-[2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl]-2-deoxy-.beta.-D-glucopyranosyl]-4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 174339-76-5
CMF C25 H35 N3 O11

Absolute stereochemistry.



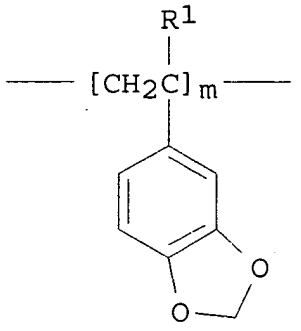
CC 6-4 (General Biochemistry)
Section cross-reference(s): 1, 33, 35, 63

IT **174339-78-7P**
(synthesis of poly (p-vinylbenzamido)-.beta.-diacetylchitobiose and its interaction with lectins for hemagglutination inhibition assays.)

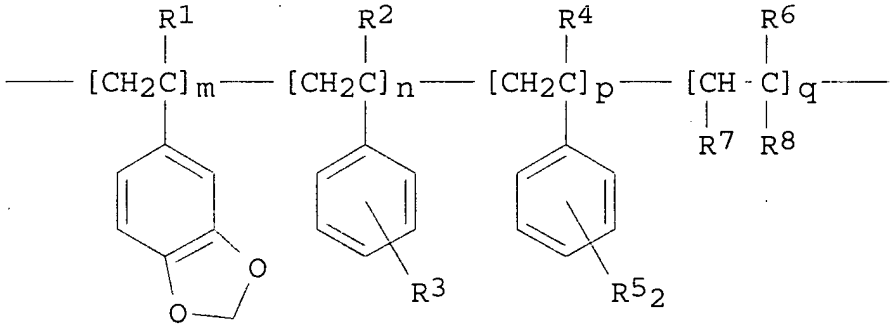
L37 ANSWER 16 OF 20 HCA COPYRIGHT 2003 ACS on STN
126:96929 Polymer of modified styrene-type unit and chemical amplification-type positive-working **resist** composition using same. Watanabe, Osamu; Takeda, Yoshifumi; Tsucha, Junji; Ishihara, Toshinobu (Shinetsu Chem Ind Co, Japan). Jpn. Kokai Tokkyo Koho JP 08286375 A2 19961101 Heisei, 14 pp. (Japanese).

CODEN: JKXXAF. APPLICATION: JP 1995-111188 19950412.

GI



I



II

AB The polymer has the general formula I or II with wt. av. mol. wt. (Mw) 3000-300,000 [R1, R2, R4, R6 = H or Me; R3, R5 = H, C1-6 alkyl, OX (X = H or acid-labile group); R7 = H and R8 = CO2Y (Y = H or acid-labile group) but R7 and R8 may link to form CO2CO; p = pos. integer, m, n, p, q = 0 or pos. integer satisfying the relation 0 < m/(m + n + p + q) .ltoreq.1]. The title compn. comprises an org. solvent, the polymer as a base resin, a acid-generating agent, and an optional dissoln. inhibitor. A **resist** using 4-vinylbenzodioxole-3,4-dihydroxystyrene copolymer (0.82:0.18 mol ratio; Mw 14,500) showed high photosensitivity, resoln., exposure latitude, and processability.

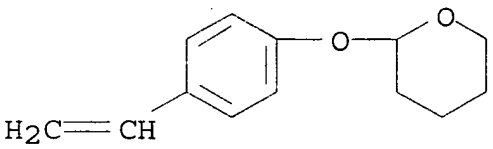
IT **185405-25-8P**
(polymer of modified styrene-type unit contg. acid-generating agent for chem. amplification pos. working **resist**)

RN 185405-25-8 HCA

CN Phenol, 4-ethenyl-, polymer with 5-ethenyl-1,3-benzodioxole and 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

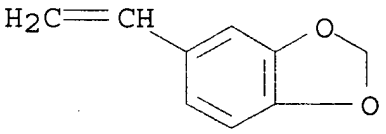
CM 1

CRN 65409-15-6
CMF C13 H16 O2



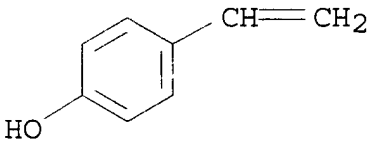
CM 2

CRN 7315-32-4
CMF C9 H8 O2



CM 3

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-039
ICS G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST vinylbenzodioxole dihydroxystyrene copolymer **resist**; chem amplification pos working **resist**; single dispersion polymer **resist**; acid generating sulfonium salt **resist**; **living polymn polymer resist**
IT **Photoresists**
(polymer of modified styrene-type unit contg. acid-generating agent for chem. amplification pos. working **resist**)
IT 13891-29-7 14159-45-6 141573-11-7 157089-26-4
(acid-generating agent; polymer of modified styrene-type unit contg. acid-generating agent for chem. amplification pos. working

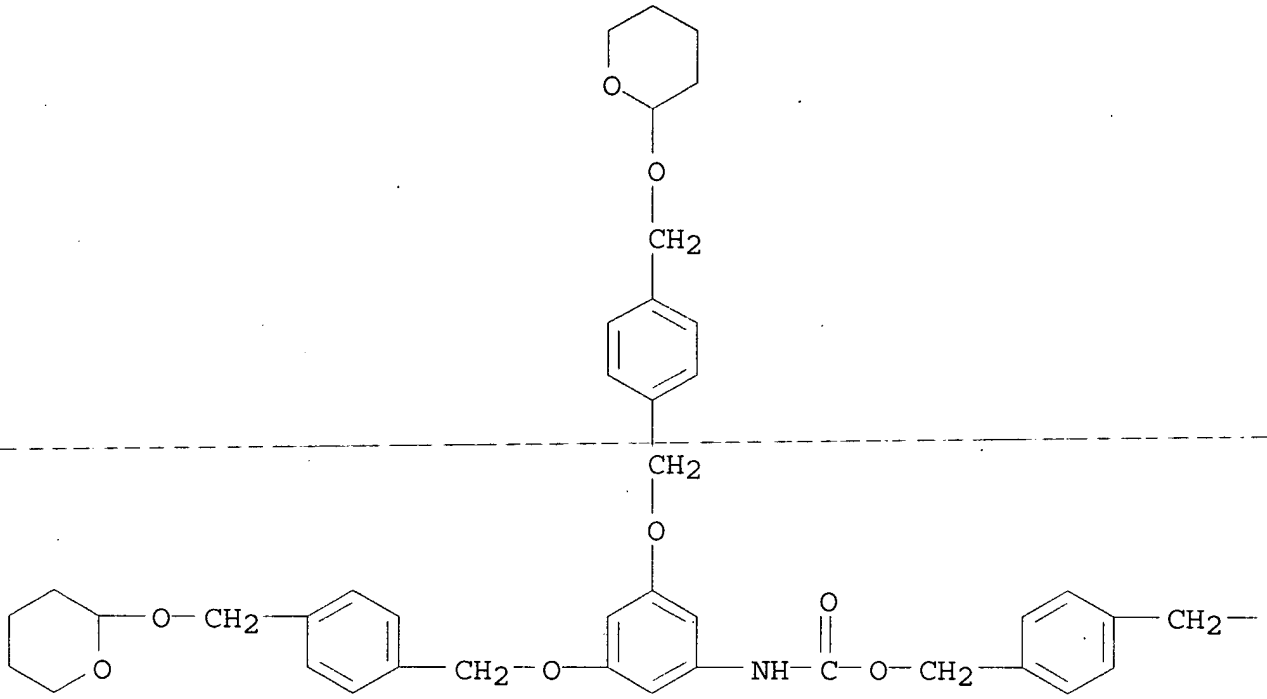
resist)
IT 117458-06-7 180921-76-0
(dissoln. inhibitor; polymer of modified styrene-type unit contg. acid-generating agent for chem. amplification pos. working **resist**)
IT 86830-84-4P 185405-11-2P 185405-14-5P 185405-17-8P
185405-21-4P **185405-25-8P** 185405-31-6P 185405-39-4P
185405-45-2P
(polymer of modified styrene-type unit contg. acid-generating agent for chem. amplification pos. working **resist**)

L37 ANSWER 17 OF 20 HCA COPYRIGHT 2003 ACS on STN
125:329604 Polymerization of styrenes and acrylates carrying dendrons of the first and second generation. Neubert, I.; Klopsch, R.; Claussen, W.; Schlueter, A. D. (Institut Organische Chemie, Freie Universitaet Berlin, Berlin, D-14195, Germany). Acta Polymerica, 47(10), 455-459 (English) 1996. CODEN: ACPODY. ISSN: 0323-7648. Publisher: VCH.
AB The synthesis of dendronized acrylate and styrene monomers with Frechet-type as well as urethane-based dendrons of the first and second generation and their radically initiated polymn. to the high mol. wt. dendrimers is reported. The second generation polymer carries 4 THP-protected OH functions per repeat unit whose quant. **deprotection** is also described.
IT **183679-50-7DP**, hydrolyzed **183679-50-7P**
(prepn. of polystyrenes and polyacrylates carrying dendrons of the first and second generation)
RN 183679-50-7 HCA
CN Carbamic acid, [3,5-bis[[4-[[(tetrahydro-2H-pyran-2-yl)oxy]methyl]phenyl]methoxy]phenyl]-, [5-[[[2-(4-ethenylphenyl)ethoxy]carbonyl]amino]-1,3-phenylene]bis(oxymethylene-4,1-phenylenemethylene) ester, homopolymer (9CI) (CA INDEX NAME)

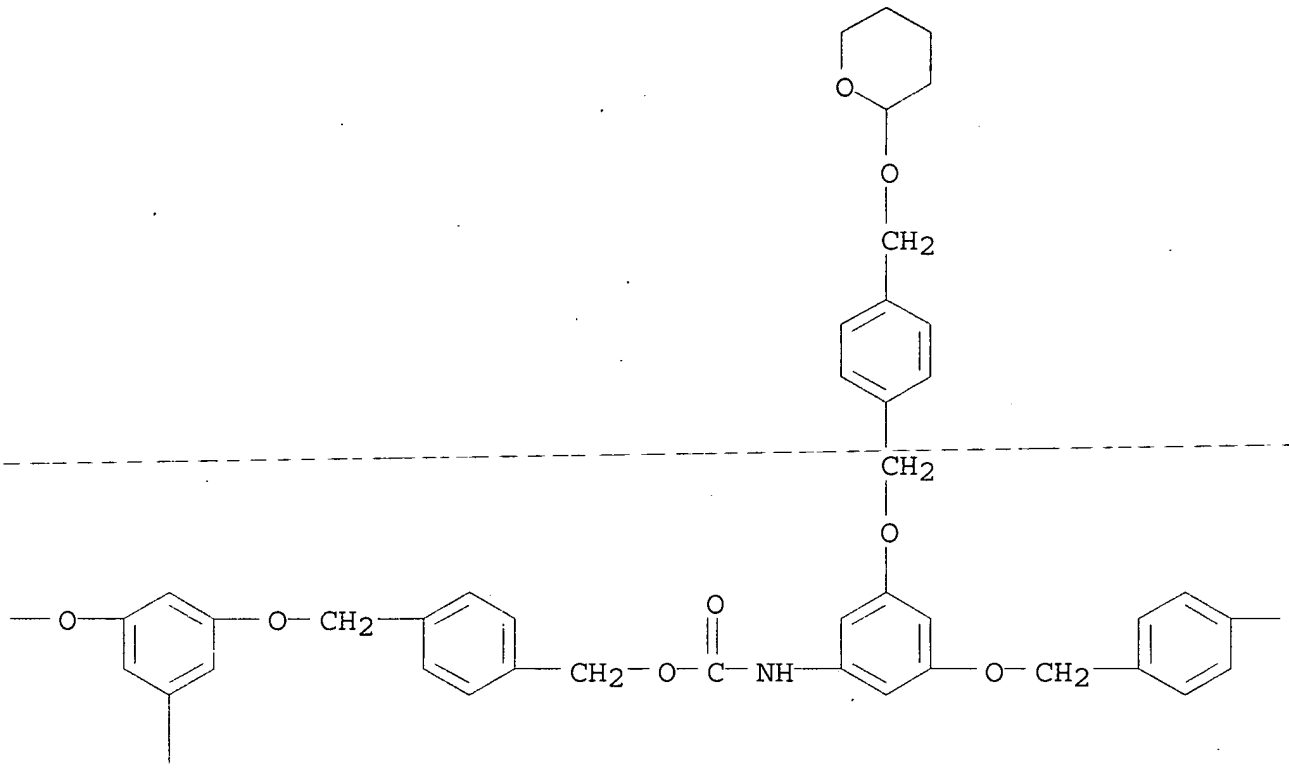
CM 1

CRN 183679-49-4
CMF C99 H107 N3 O20

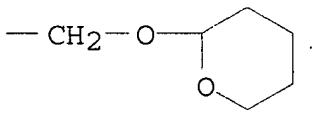
PAGE 1-A



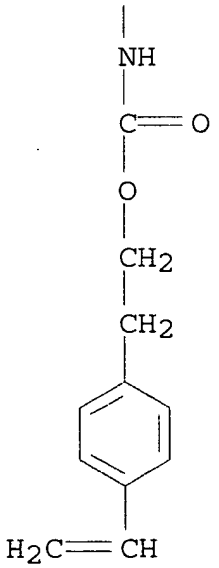
PAGE 1-B



PAGE 1-C



PAGE 2-B



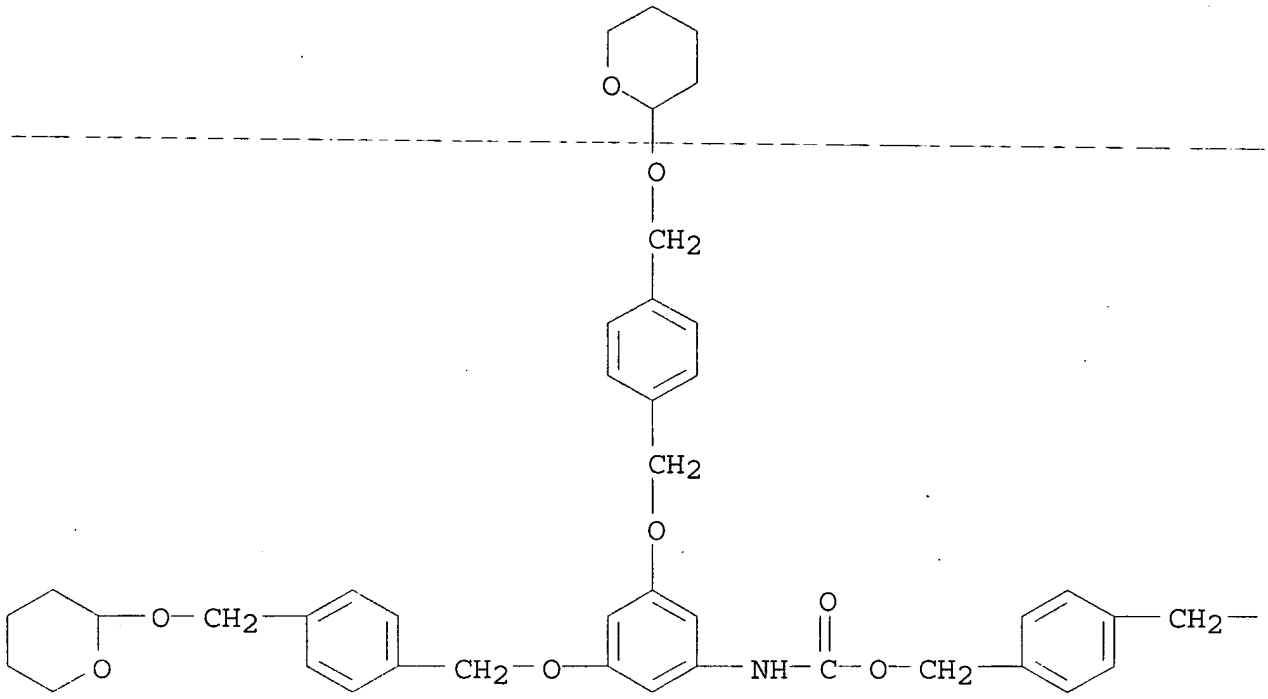
RN 183679-50-7 HCA
CN Carbamic acid, [3,5-bis[[4-[[(tetrahydro-2H-pyran-2-

yl)oxy]methyl]phenyl]methoxy]phenyl]-, [5-[[[2-(4-ethenylphenyl)ethoxy]carbonyl]amino]-1,3-phenylene]bis(oxymethylene-4,1-phenylenemethylene) ester, homopolymer (9CI) (CA INDEX NAME)

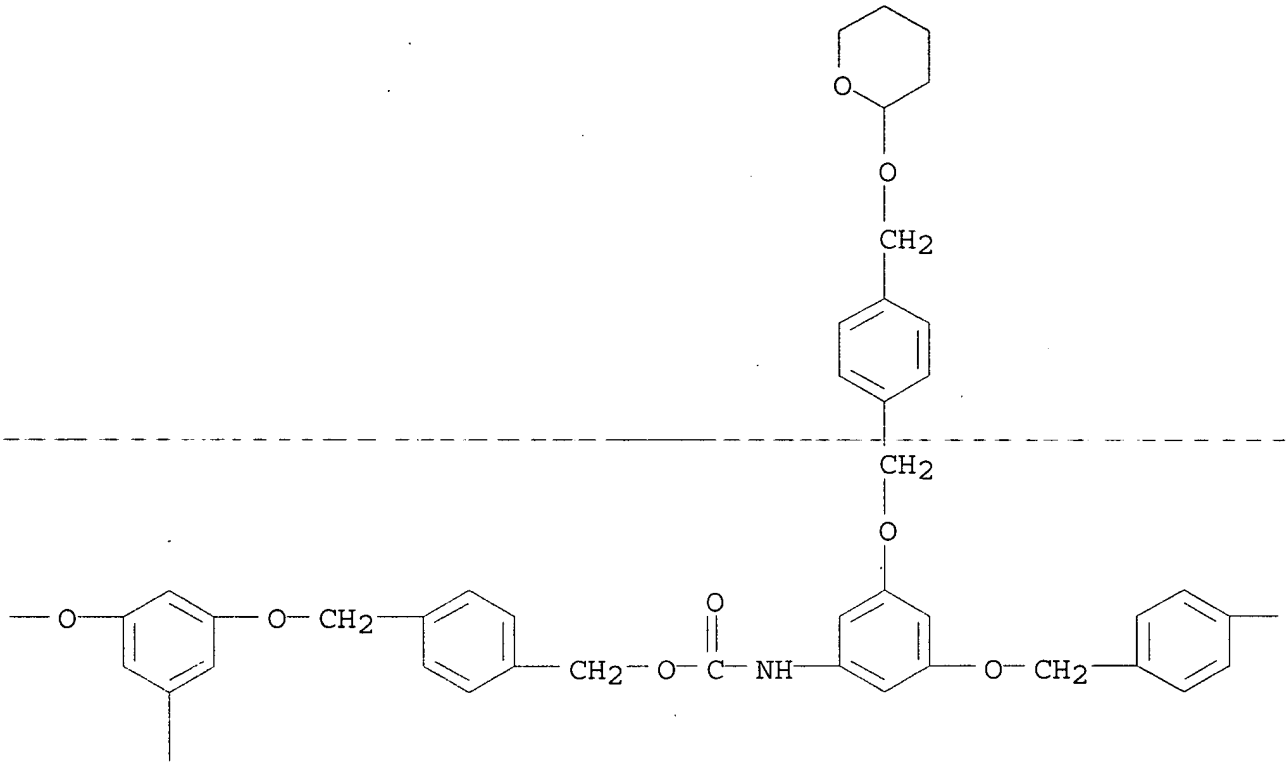
CM 1

CRN 183679-49-4
CMF C99 H107 N3 O20

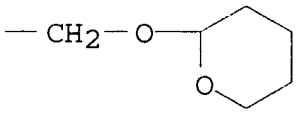
PAGE 1-A



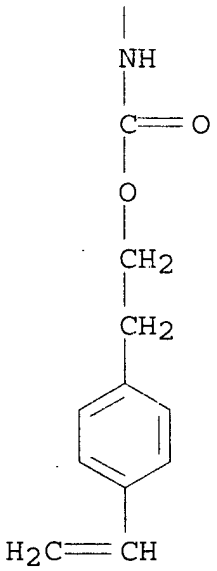
PAGE 1-B



PAGE 1-C



PAGE 2-B



CC 35-4 (Chemistry of Synthetic High Polymers)
IT 183679-42-7P 183679-44-9P **183679-50-7DP**, hydrolyzed

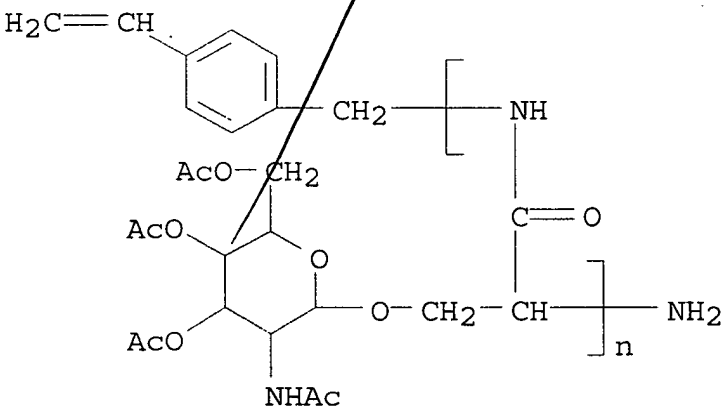
183679-50-7P
(prepn. of polystyrenes and polyacrylates carrying dendrons of the first and second generation)

L37 ANSWER 18 OF 20 HCA COPYRIGHT 2003 ACS on STN
125:34292 First Synthesis of Glycopeptide Macromonomers and Graft-Type Sugar-Containing Polymers with Glycopeptide Side Chains. Aoi, Keigo; Tsutsumiuchi, Kaname; Aoki, Emiko; Okada, Masahiko (Faculty of Agricultural Sciences, Nagoya University, Nagoya, 464-01, Japan). Macromolecules, 29(12), 4456-4458 (English) 1996. CODEN: MAMOBX. ISSN: 0024-9297. Publisher: American Chemical Society.

AB Well-defined glycopeptide macromonomers were prepd. by vinylbenzylamine-initiated **living** ring-opening **polymn**. of sugar-substituted .alpha.-amino acid N-carboxyanhydrides, D-glucose and N-acetyl-D-glucosamine deriv.-carrying monomers, i.e., O-(tetra-O-acetyl-.beta.-D-glucopyranosyl)-L-serine N-carboxyanhydride (Ia) and O-(2-acetamido-3,4,6-tri-O-acetyl-2-deoxy-b-d-glucopyranosyl)-l-serine N-carboxyanhydride (Ib). Ring-opening polymn. of Ia, Ib with p-vinylbenzylamine as an initiator was carried out in dry dichloromethane under a nitrogen atm. The macromonomers were further polymd. with acrylamide with subsequent or preliminary deacetylation. The min. concn. of glycopeptide polymers inhibiting aggregate formation between wheat germ agglutinin and erythrocytes was as low as 4.9 .times. 10-5 mol/L.

IT **177720-61-5DP**, deacetylated, polymers with acrylamide
177770-81-9DP, deacetylated
(macromonomer; prepn. of styryl group-contg. glycopeptide macromonomers and their polymn. with acrylamide to form sugar-contg. polymers with glycopeptide side chains)

RN 177720-61-5 HCA
CN Poly[imino[1-oxo-2-[[[3,4,6-tri-O-acetyl-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl]oxy]methyl]-1,2-ethanediyl]], .alpha.-[(4-ethenylphenyl)methyl]-.omega.-amino-, (S)- (9CI) (CA INDEX NAME)

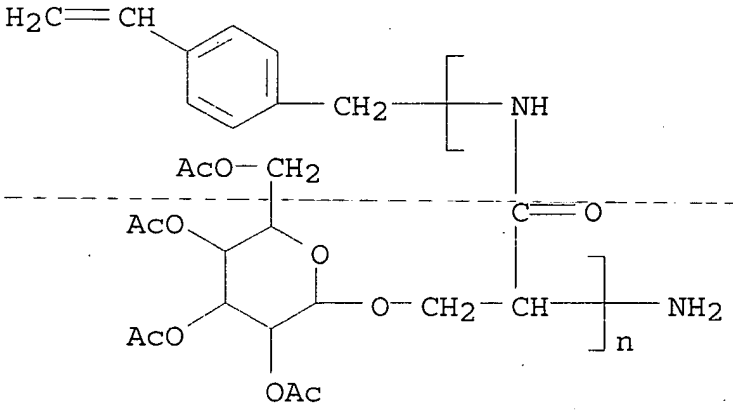


RN 177770-81-9 HCA

CN 2-Propenamide, polymer with (S)-.alpha.-[(4-ethenylphenyl)methyl]-.omega.-aminopoly[imino[1-oxo-2-[[(2,3,4,6-tetra-O-acetyl-.beta.-D-glucopyranosyl)oxy]methyl]-1,2-ethanediyl]] (9CI) (CA INDEX NAME)

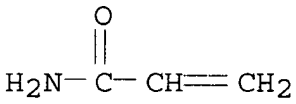
CM 1

CRN 177720-59-1
CMF (C17 H23 N O11)n C9 H11 N
CCI PMS



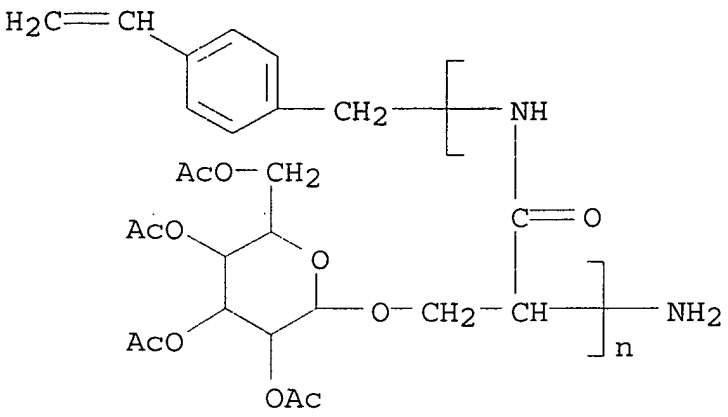
CM 2

CRN 79-06-1
CMF C3 H5 N O

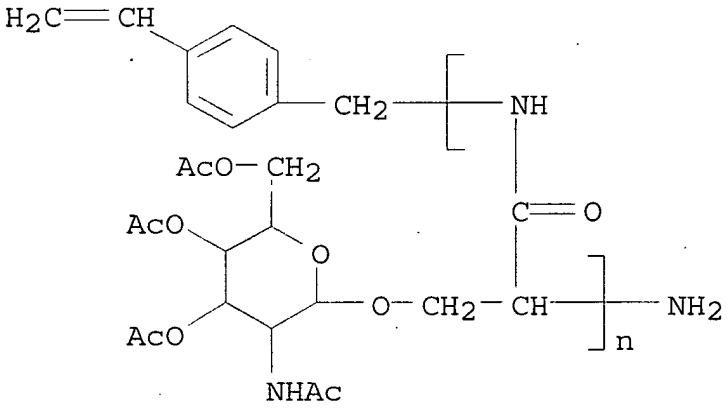


IT **177720-59-1P 177720-61-5P 177770-81-9P**
177770-82-0DP, deacetylated **177770-82-0P**
(macromonomer; prepn. of styryl group-contg. glycopeptide macromonomers and their polymn. with acrylamide to form sugar-contg. polymers with glycopeptide side chains)

RN 177720-59-1 HCA
CN Poly[imino[1-oxo-2-[[(2,3,4,6-tetra-O-acetyl-.beta.-D-glucopyranosyl)oxy]methyl]-1,2-ethanediyl]], .alpha.-[(4-ethenylphenyl)methyl]-.omega.-amino-, (S)- (9CI) (CA INDEX NAME)



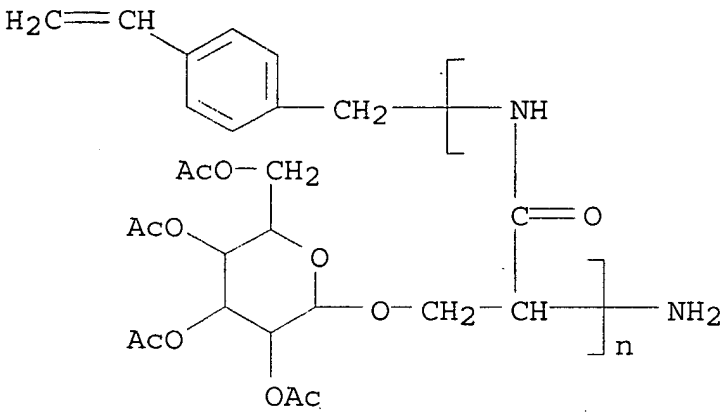
RN 177720-61-5 HCA
CN Poly[imino[1-oxo-2-[[[3,4,6-tri-O-acetyl-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl]oxy]methyl]-1,2-ethanediyl]], .alpha.-[(4-ethenylphenyl)methyl]-.omega.-amino-, (S)- (9CI) (CA INDEX NAME)



RN 177770-81-9 HCA
CN 2-Propenamide, polymer with (S)-.alpha.-[(4-ethenylphenyl)methyl]-.omega.-aminopoly[imino[1-oxo-2-[[(2,3,4,6-tetra-O-acetyl-.beta.-D-glucopyranosyl)oxy]methyl]-1,2-ethanediyl]] (9CI) (CA INDEX NAME)

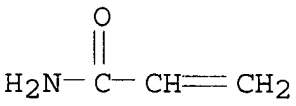
CM 1

CRN 177720-59-1
CMF (C17 H23 N O11)n C9 H11 N
CCI PMS



CM 2

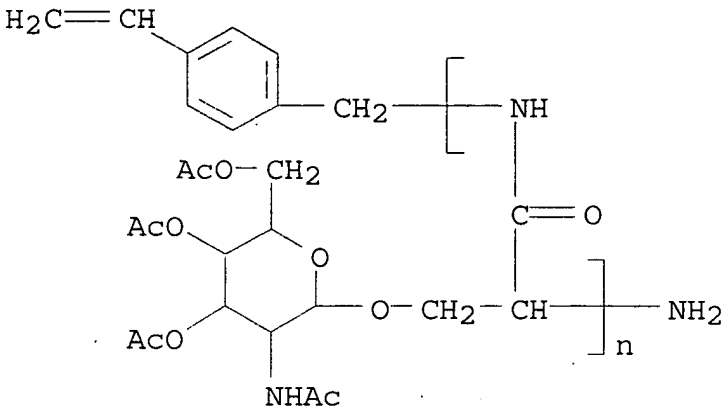
CRN 79-06-1
CMF C3 H5 N O



RN 177770-82-0 HCA
CN 2-Propenamide, polymer with (S)-.alpha.-hydro-.omega.-[[(4-ethenylphenyl)methyl]amino]poly[imino[1-[[[2-(acetylamino)-3,4,6-tri-O-acetyl-.beta.-D-glucopyranosyl]oxy]methyl]-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)

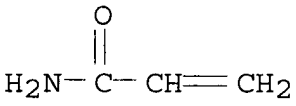
CM 1

CRN 177720-61-5
CMF (C17 H24 N2 O10)n C9 H11 N
CCI PMS



CM 2

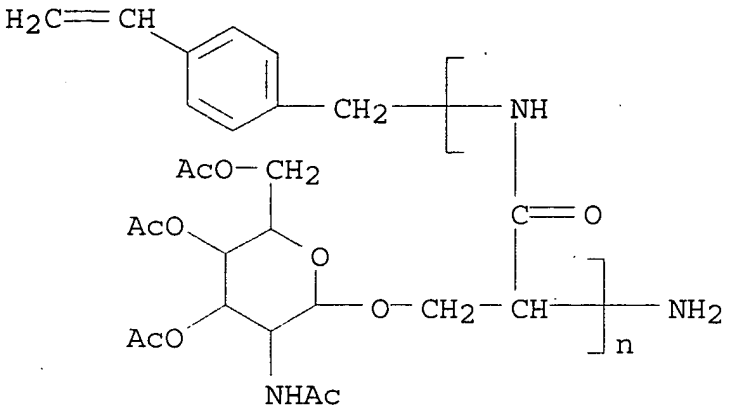
CRN 79-06-1
CMF C3 H5 N O



RN 177770-82-0 HCA
CN 2-Propenamide, polymer with (S)-.alpha.-hydro-.omega.-[[(4-ethenylphenyl)methyl]amino]poly[imino[1-[[[2-(acetylamino)-3,4,6-tri-O-acetyl-.beta.-D-glucopyranosyl]oxy]methyl]-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)

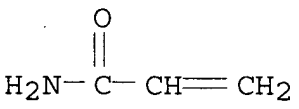
CM 1

CRN 177720-61-5
CMF (C17 H24 N2 O10)n C9 H11 N
CCI PMS

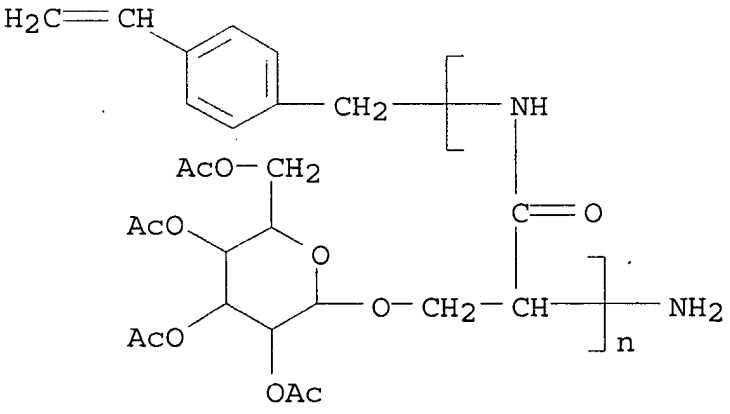


CM 2

CRN 79-06-1
CMF C3 H5 N O



IT **177720-59-1DP**, deacetylated, polymers with acrylamide (macromonomer; prepn. of styryl group-contg. glycopeptide macromonomers and their polymn. with acrylamide to form sugar-contg. polymers with glycopeptide side chains)
RN 177720-59-1 HCA
CN Poly[imino[1-oxo-2-[[(2,3,4,6-tetra-O-acetyl-.beta.-D-glucopyranosyl)oxy]methyl]-1,2-ethanediyl]], .alpha.-[(4-ethenylphenyl)methyl]-.omega.-amino-, (S)- (9CI) (CA INDEX NAME)



CC 35-7 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 3, 33, 34

IT **Polymerization**
(**living**, ring-opening, prepn. of styryl group-contg. glycopeptide macromonomers and their polymn. with acrylamide to form sugar-contg. polymers with glycopeptide side chains)

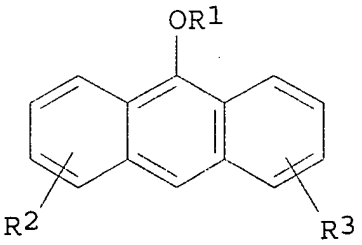
IT 177720-60-4DP, reaction products with p-(aminomethyl)styrene; deacetylated and polymd. with acrylamide, or polymd. with acrylamide and deacetylated **177720-61-5DP**, deacetylated, polymers with acrylamide **177770-81-9DP**, deacetylated
(macromonomer; prepn. of styryl group-contg. glycopeptide macromonomers and their polymn. with acrylamide to form sugar-contg. polymers with glycopeptide side chains)

IT **177720-59-1P 177720-61-5P 177770-81-9P**
177770-82-0DP, deacetylated **177770-82-0P**
(macromonomer; prepn. of styryl group-contg. glycopeptide macromonomers and their polymn. with acrylamide to form sugar-contg. polymers with glycopeptide side chains)

IT 155313-04-5DP, reaction products with p-(aminomethyl)styrene; deacetylated and polymd. with acrylamide, or polymd. with acrylamide and deacetylated **177720-59-1DP**, deacetylated, polymers with acrylamide
(macromonomer; prepn. of styryl group-contg. glycopeptide macromonomers and their polymn. with acrylamide to form sugar-contg. polymers with glycopeptide side chains)

L37 ANSWER 19 OF 20 HCA COPYRIGHT 2003 ACS on STN
123:156431 Positive-working **resist** compositions containing anthracene derivatives as far-UV light-absorbing agents and fine pattern formation. Endo, Masataka; Katsuyama, Akiko; Urano, Fumyoshi; Soki, Tooru (Matsushita Electric Ind Co Ltd, Japan; Wako Pure Chem Ind Ltd). Jpn. Kokai Tokkyo Koho JP 07084364 A2 19950331 Heisei, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1993-249967 19930910.

GI



I

AB The compns. contain a resin, which becomes alkali-sol. by **deprotection** with acids, a photochem. acid generator, anthracene derivs. I (R1 = CR4R5OR6, CR7R8R9, CO2CMe3; R2-3 = H, halo, C1-6 alkyl, C1-6 alkoxy; R4 = H, C1-6 alkyl; R5-6 = C1-6 alkyl; R4 and R5 and/or R5 and R6 may be fused to form CH2; R7-9 =

C1-6 alkyl; R8 and R9 may be fused to form CH2), and a solvent dissolving these components. A **resist** pattern is formed by coating a semiconductor substrate with the **resist** compn., heating, irradiating the coating with a far-UV light or KrF excimer laser, heating, and developing with an alk. developer. The **resist** compns. show a high resoln. and sensitivity even when a substrate has steps.

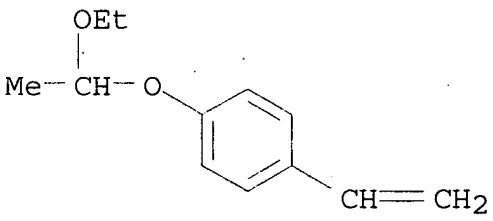
IT **158593-28-3P**
(pos.-working near-UV or excimer laser-sensitive **resist** compns. contg. alk.-sol. resin, photochem. acid generator, and anthracene derivs.)

RN 158593-28-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

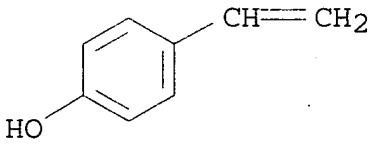
CM 1

CRN 157057-20-0.
CMF C12 H16 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-004
ICS G03F007-004; G03F007-033; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76

ST **resist** anthracene near UV absorber; semiconductor pattern pos working **resist**

IT **Resists**
(photo-, pos.-working, pos.-working near-UV or excimer laser-sensitive **resist** compns. contg. alk.-sol. resin,

photochem. acid generator, and anthracene derivs.)
IT 166034-39-5P 166034-40-8P 166034-41-9P 166034-42-0P
(near-UV absorber; pos.-working near-UV or excimer laser-sensitive **resist** compns. contg. alk.-sol. resin, photochem. acid generator, and anthracene derivs.)
IT 138529-91-6P, 2-Cyclohexylcarbonyl-2-(p-toluenesulfonyl)propane
(photochem. acid generator; pos.-working near-UV or excimer laser-sensitive **resist** compns. contg. alk.-sol. resin, photochem. acid generator, and anthracene derivs.)
IT 941-55-9P, p-Toluenesulfonyl azide 1125-71-9P 1127-39-5P, 2-Chloro-1-cyclohexyl-2-methyl-1-propanone 1538-87-0P, 1-Chloroethyl methyl ether 7081-78-9P, 1-Chloroethyl ethyl ether 82386-41-2P, Bis(cyclohexylsulfonyl)methane 84607-80-7P, 1-Chloroethyl isopropyl ether
(pos.-working near-UV or excimer laser-sensitive **resist** compns. contg. alk.-sol. resin, photochem. acid generator, and anthracene derivs.)
IT 129674-22-2P, p-(tert-Butoxycarbonyloxy)styrene-p-hydroxystyrene copolymer 138529-81-4P, Bis(cyclohexylsulfonyl)diazomethane **158593-28-3P** 159377-76-1P 166034-44-2P
(pos.-working near-UV or excimer laser-sensitive **resist** compns. contg. alk.-sol. resin, photochem. acid generator, and anthracene derivs.)
IT 79-30-1, Isobutyryl chloride 90-44-8, Anthrone 98-59-9, p-Toluenesulfonyl chloride 108-85-0, Bromocyclohexane 123-63-7, Paraldehyde 824-79-3, Sodium p-toluenesulfinate 1569-69-3, Cyclohexanethiol 2182-55-0
(pos.-working near-UV or excimer laser-sensitive **resist** compns. contg. alk.-sol. resin, photochem. acid generator, and anthracene derivs.)

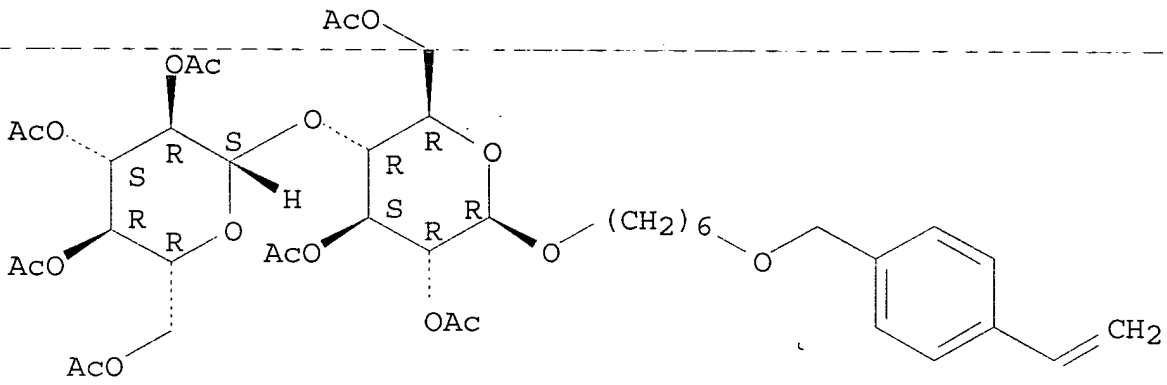
L37 ANSWER 20 OF 20 HCA COPYRIGHT 2003 ACS on STN
118:125105 Synthesis of a hexyl methacrylate-terminated disaccharide monomer and study of its radically initiated homo- and copolymerization with styrene. Charreyre, Marie Therese; Boullanger, Paul; Pichot, Christian; Delair, Thierry; Mandrand, Bernard; Llauro, Marie France (ESCIL, Univ. Claude Bernard Lyon 1, Villeurbanne, 69622, Fr.). Makromolekulare Chemie, 194(1), 117-35 (English) 1993. CODEN: MACEAK. ISSN: 0025-116X.
AB A new disaccharide monomer, 6(-methacryloxyloxy)hexyl .beta.-D-cellobioside (I), was prepd. through a 5-step procedure (starting from cellobiose), in which the glycosylation and esterification reactions were optimized. Kinetics of radical homopolymn. in DMSO soln. were studied through 1H NMR, allowing the detn. of the parameter kp/kt1/2 (kp is polymn. rate const., kt is termination rate const.). Copolymns. with styrene (II) were also studied, giving the reactivity ratios rII = 0.64 and rI = 0.08. Characterization of the various (co)polymers in terms of compn., microstructure, and mol. wt. was carried out using 1H and 13C NMR spectroscopy, and gel-permeation chromatog. in THF. A preferential syndiotactic configuration was clearly evidenced in the I homopolymer.

IT **146322-58-9P**
(formation of, in prepn. of (vinylbenzyloxy)hexyl heptaacetylcellobioside)
RN 146322-58-9 HCA
CN .beta.-D-Glucopyranoside, 6-[(4-ethenylphenyl)methoxy]hexyl 4-O-(2,3,4,6-tetra-O-acetyl-.beta.-D-glucopyranosyl)-, triacetate, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 146292-96-8
CMF C41 H56 O19

Absolute stereochemistry.



CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36, 44
IT 146292-99-1P **146322-58-9P**
(formation of, in prepn. of (vinylbenzyloxy)hexyl heptaacetylcellobioside)
IT 146292-95-7P
(prepn. and **deprotection** and reaction of, with methacryloyl chloride)
IT 146292-93-5P 146292-97-9P 146292-98-0P 146473-48-5P
(prepn. and **deprotection** of)

(some of claim 4 may be found in L38)

=> d 138 1-15 cbib abs hitstr hitind

L38 ANSWER 1 OF 15 HCA COPYRIGHT 2003 ACS on STN
137:391068 **Photoresist** compositions with high resolution, good pattern shape, and reduced edge roughness for electron beam or x-ray photolithography in semiconductor device fabrication. Yasunami, Shoichiro; Takahashi, Omote (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002333714 A2 20021122, 47 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-139097 20010509.
AB The compns. comprise (A) photoacid generators, (B) N-contg. compds. generating carboxyl groups in a mol. by acids, and (C) alkali-insol.

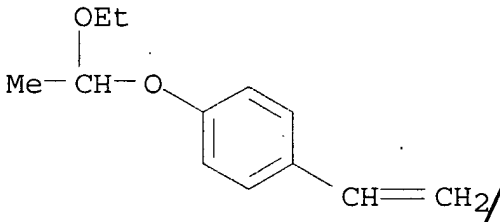
resins that increase their alkali soly. by acids for pos. **photoresists**. Alternatively, the compns. contain A, B, (D) alkali-sol. resins, and (E) crosslinkers that react with D by acids for neg. **photoresists**.

IT **158593-28-3P 279244-37-0P 288620-13-3P 289706-80-5P**
(pos. **resist** contg.; **photoresist** compns. with high resoln. and good pattern shape for electron beam or x-ray photolithog.)

RN 158593-28-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

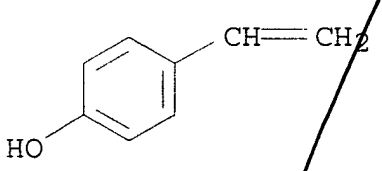
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

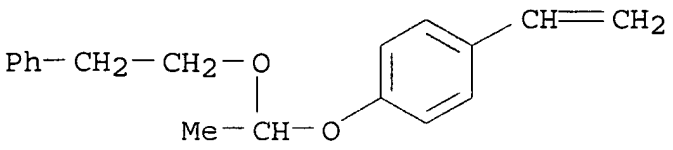
CRN 2628-17-3
CMF C8 H8 O



RN 279244-37-0 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

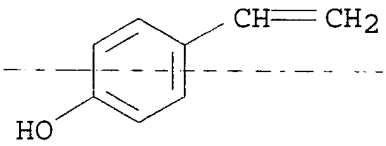
CM 1

CRN 246157-37-9
CMF C18 H20 O2



CM 2

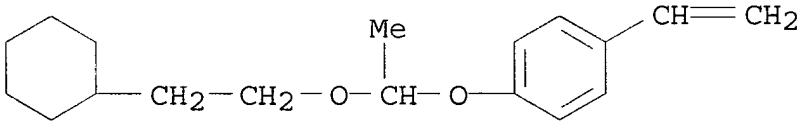
CRN 2628-17-3
CMF C8 H8 O



RN 288620-13-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

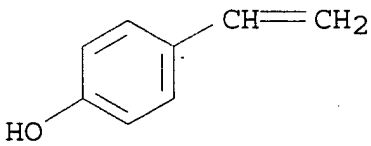
CM 1

CRN 288620-12-2
CMF C18 H26 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O

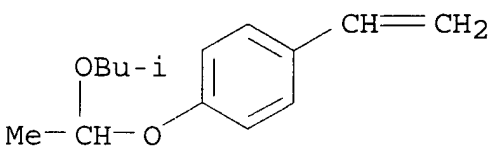


RN 289706-80-5 HCA
CN Phenol, 4-ethenyl-, polymer with ethenylbenzene and 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene (9CI) (CA INDEX

NAME)

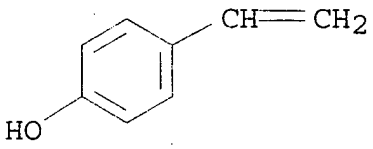
CM 1

CRN 192314-53-7
CMF C14 H20 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

IC ICM G03F007-039
ICS G03F007-004; G03F007-038; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
ST **photoresist** chem amplification edge roughness prevention; amine electron beam **photoresist** resoln; semiconductor device fabrication **photoresist** x ray
IT X-ray **resists**
(**photoresist** compns. with high resoln. and good pattern shape for electron beam or x-ray photolithog.)
IT 161679-94-3P 185502-14-1P 197087-74-4P 475673-37-1P 475673-38-2P
(crosslinker, neg. **resist** contg.; **photoresist** compns. with high resoln. and good pattern shape for electron beam or x-ray photolithog.)

IT 3089-11-0 32449-09-5
(crosslinker, neg. **resist** contg.; **photoresist** compns. with high resoln. and good pattern shape for electron beam or x-ray photolithog.)
IT 24979-69-9P 24979-70-2P 24979-73-5P 24979-74-6P
173786-80-6DP, 4-Acetoxystyrene-4-methoxystyrene copolymer, **hydrolyzed** 321164-59-4P 345212-59-1P 396098-38-7P
(neg. **resist** contg.; **photoresist** compns. with high resoln. and good pattern shape for electron beam or x-ray photolithog.)
IT 162846-57-3P 212555-24-3P, 4-Cyclohexylphenoxyethyl vinyl ether
(**photoresist** compns. with high resoln. and good pattern shape for electron beam or x-ray photolithog.)
IT 64113-91-3P 85451-11-2P 88722-74-1P 94391-95-4P 113131-45-6P
147202-35-5P 475673-33-7P 475673-34-8P 475673-35-9P
475673-36-0P
(**photoresist** compns. with high resoln. and good pattern shape for electron beam or x-ray photolithog.)
IT 50-00-0, Formaldehyde, reactions 110-75-8, 2-Chloroethyl vinyl ether 609-36-9, Proline 1131-60-8, p-Cyclohexylphenol
110726-28-8, Trisp PA
(**photoresist** compns. with high resoln. and good pattern shape for electron beam or x-ray photolithog.)
IT 24979-70-2DP, esters 24979-70-2DP, VP 8000, reaction products with cyclohexylphenoxyethyl vinyl ether **158593-28-3P**
160309-96-6DP, p-Acetoxystyrene-tert-butyl methacrylate copolymer, **hydrolyzed** 212555-24-3DP, 4-Cyclohexylphenoxyethyl vinyl ether, reaction products with polyhydroxystyrene
279244-37-0P 288620-13-3P 289706-80-5P
(pos. **resist** contg.; **photoresist** compns. with high resoln. and good pattern shape for electron beam or x-ray photolithog.)

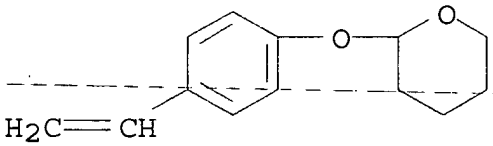
L38 ANSWER 2 OF 15 HCA COPYRIGHT 2003 ACS on STN
137:177107 Positive-working chemically amplified **photoresist** composition for forming contact holes of semiconductor device. Tan, Shiro; Fujimori, Toru; Yamanaka, Tsukasa (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002229210 A2 20020814, 29 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-29753 20010206.
AB The title compn. consists of: a resin, which contains resin A and resin B, and increases the soly. in an alkali developer reacting with an acid, and a photoacid generator, wherein the glass transition temp. of resin A is higher than that of resin B before reacting an acid and smaller than that of resin B after reacting an acid. The compn. provides the redn. of pattern size only under flow-baking temp.
IT **125325-82-8DP, hydrolyzed 158593-28-3DP, hydrolyzed 177034-73-0DP, hydrolyzed 186769-12-0DP, hydrolyzed 199432-82-1DP, hydrolyzed 325143-37-1DP, hydrolyzed 372968-15-5DP, hydrolyzed 438535-78-5DP, hydrolyzed 446263-02-1DP, hydrolyzed**

446263-03-2DP, hydrolyzed 446263-04-3DP, hydrolyzed
(pos.-working chem. amplified **photoresist** compn. for forming contact holes of semiconductor device)

RN 125325-82-8 HCA
CN Phenol, 4-ethenyl-, polymer with 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

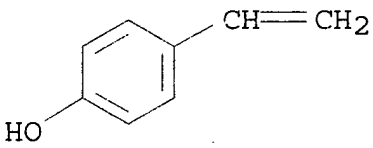
CM 1

CRN 65409-15-6
CMF C13 H16 O2



CM 2

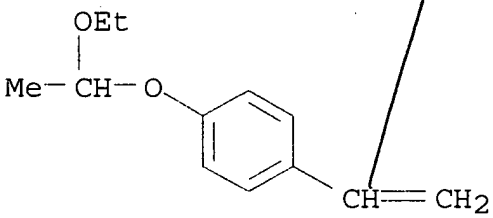
CRN 2628-17-3
CMF C8 H8 O



RN 158593-28-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

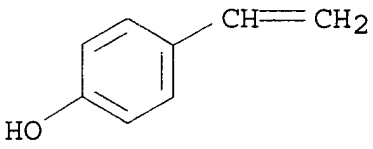
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

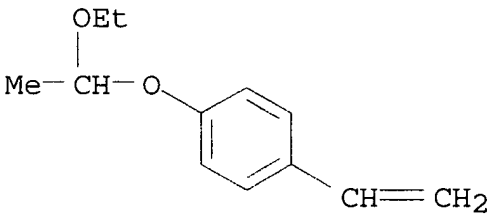
CRN 2628-17-3
CMF C8 H8 O



RN 177034-73-0 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

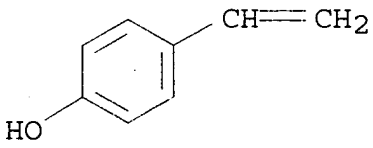
CM 1

CRN 157057-20-0
CMF C12 H16 O2



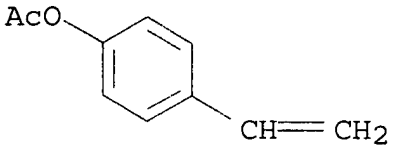
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

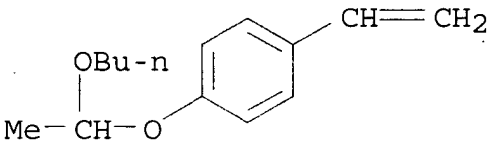
CRN 2628-16-2
CMF C10 H10 O2



RN 186769-12-0 HCA
CN Phenol, 4-ethenyl-, polymer with 1-(1-butoxyethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

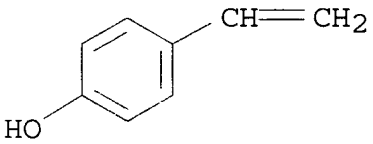
CM 1

CRN 170635-32-2
CMF C14 H20 O2



CM 2

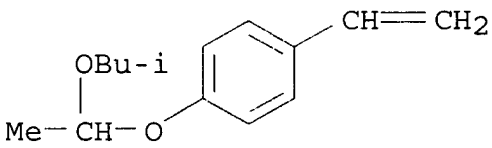
CRN 2628-17-3
CMF C8 H8 O



RN 199432-82-1 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

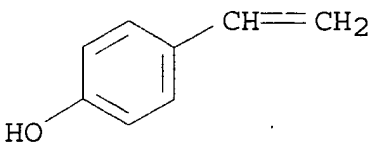
CM 1

CRN 192314-53-7
CMF C14 H20 O2



CM 2

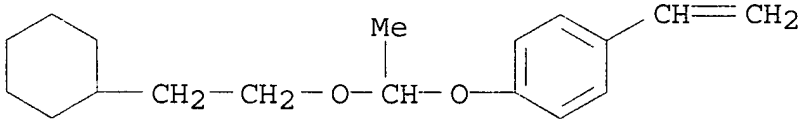
CRN 2628-17-3
CMF C8 H8 O



RN 325143-37-1 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 1-(1,1-dimethylethyl)-4-ethenylbenzene (9CI) (CA INDEX NAME)

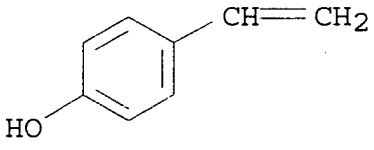
CM 1

CRN 288620-12-2
CMF C18 H26 O2



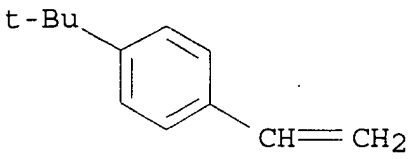
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

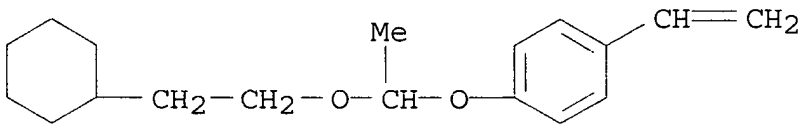
CRN 1746-23-2
CMF C12 H16



RN 372968-15-5 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

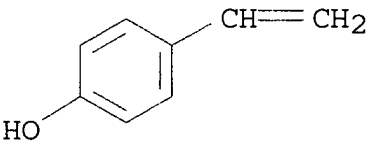
CM 1

CRN 288620-12-2
CMF C18 H26 O2



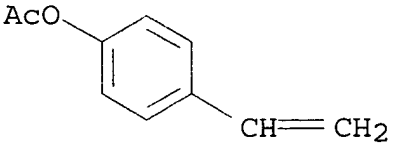
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

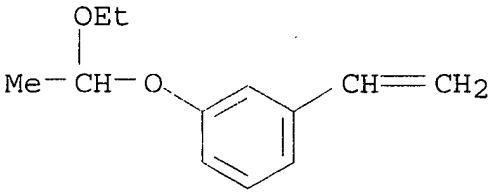
CRN 2628-16-2
CMF C10 H10 O2



RN 438535-78-5 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethenyl-3-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

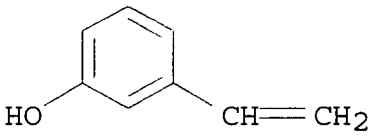
CM 1

CRN 246157-44-8
CMF C12 H16 O2



CM 2

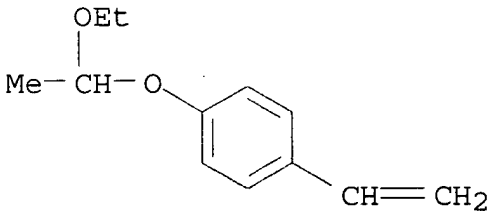
CRN 620-18-8
CMF C8 H8 O



RN 446263-02-1 HCA
CN Pentanoic acid, 4-ethenylphenyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

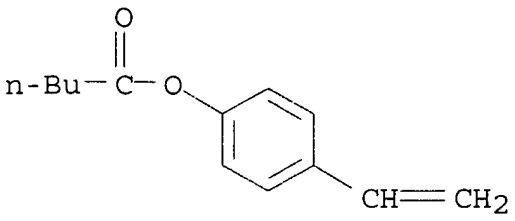
CM 1

CRN 157057-20-0
CMF C12 H16 O2



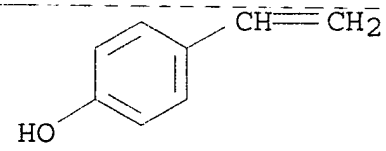
CM 2

CRN 148798-88-3
CMF C13 H16 O2



CM 3

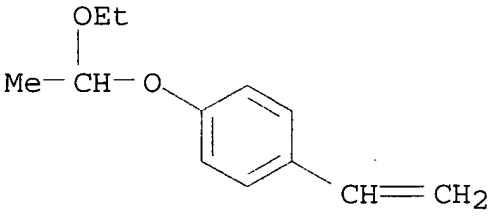
CRN 2628-17-3
CMF C8 H8 O



RN 446263-03-2 HCA
CN Phenol, 4-ethenyl-, methanesulfonate, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

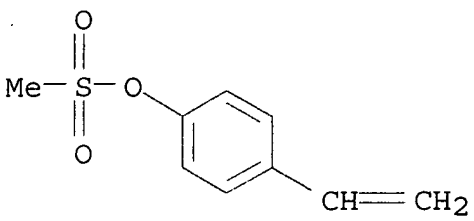
CM 1

CRN 157057-20-0
CMF C12 H16 O2



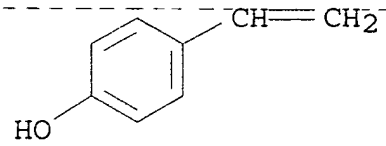
CM 2

CRN 22909-67-7
CMF C9 H10 O3 S



CM 3

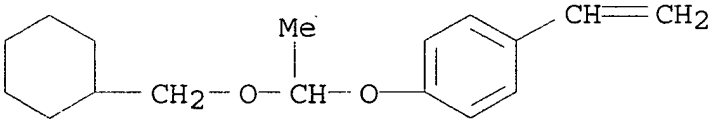
CRN 2628-17-3
CMF C8 H8 O



RN 446263-04-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(cyclohexylmethoxy)ethoxy]-4-ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

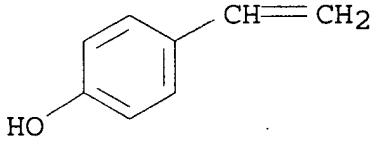
CM 1

CRN 430437-16-4
CMF C17 H24 O2



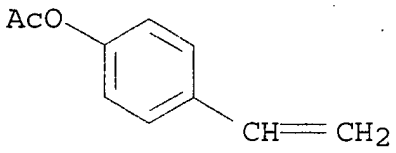
CM 2

CRN 2628-17-3
CMF C8 H8 O



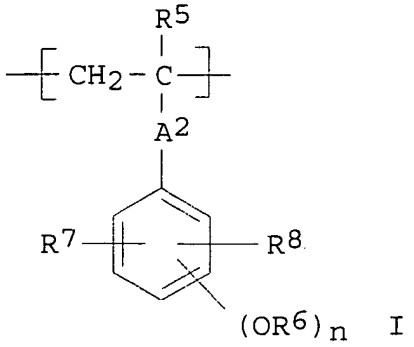
CM 3

CRN 2628-16-2
CMF C10 H10 O2

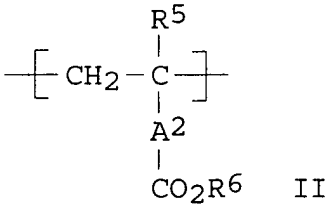


IC ICM G03F007-039
ICS C08K005-00; C08L025-00; G03F007-40; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
ST pos working amplified **photoresist** compn contact hole semiconductor device
IT Contact holes
Positive **photoresists**
Semiconductor device fabrication
(pos.-working chem. amplified **photoresist** compn. for forming contact holes of semiconductor device)
IT **125325-82-8DP, hydrolyzed** 129674-22-2DP, **hydrolyzed 158593-28-3DP, hydrolyzed 177034-73-0DP, hydrolyzed 186769-12-0DP, hydrolyzed 199432-82-1DP, hydrolyzed** 200808-68-0DP, **hydrolyzed 325143-37-1DP, hydrolyzed 372968-15-5DP, hydrolyzed 438535-78-5DP, hydrolyzed 446263-02-1DP, hydrolyzed 446263-03-2DP, hydrolyzed 446263-04-3DP, hydrolyzed**
(pos.-working chem. amplified **photoresist** compn. for forming contact holes of semiconductor device)

L38 ANSWER 3 OF 15 HCA COPYRIGHT 2003 ACS on STN
137:54627 Electron-beam or x-ray positive-working **resists** showing high sensitivity and resolution, and enhanced pattern profiles. Aogo, Toshiaki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002182392 A2 20020626, 56 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-376059 20001211.
GI



I



II

AB The pos. **resist** compns. contain (A) resins having repeating units I and/or II [R5 = H, halogen, CN, (substituted) alkyl, haloalkyl; OR6, CO2R6 = acid-decompg., alkali-sol. group; R7, R8 = H, OH, halogen, CN, (substituted) alkoxy, acyl, alkyl, cycloalkyl, alkenyl, aralkyl, aryl; A2 = single bond, (substituted) divalent alkynylene, alkenylene, cycloalkylene, arylene, OCOR9, COOR10, CONR11R12; R9, R10, R12 = single bond, divalent alkylene, alkenylene, cycloalkylene, or arylene which may have ether, ester, amide, urethane, ureido and may be substituted; R11 = H, (substituted) alkyl, cycloalkyl, aralkyl, aryl; n = 1-3 integer; R6, R6 and R7 or R8, or R7 and R8 may be bonded together] and (B) disulfonic acid group-contg. compds.

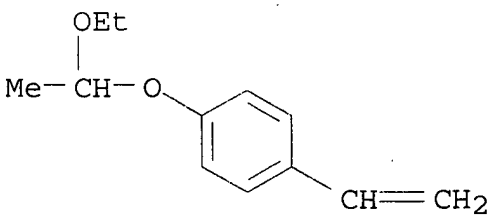
IT **158593-28-3P 438535-78-5P 438535-80-9P**
438535-82-1P 438535-85-4P 438535-88-7P
(electron-beam or x-ray pos.-working **resists** showing high sensitivity and resoln., and enhanced pattern profiles)

RN 158593-28-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

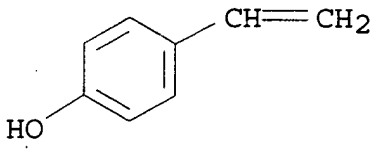
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

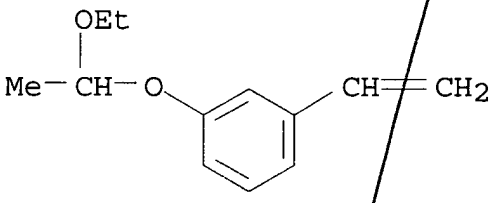
CRN 2628-17-3
CMF C8 H8 O



RN 438535-78-5 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethenyl-3-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

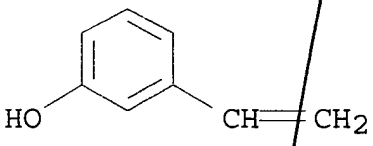
CM 1

CRN 246157-44-8
CMF C12 H16 O2



CM 2

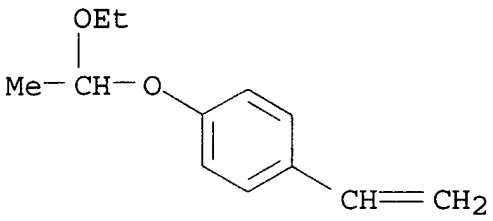
CRN 620-18-8
CMF C8 H8 O



RN 438535-80-9 HCA
CN Phenol, 4-ethenyl-, polymer with 5-ethenyl-1,3-benzodioxole and 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

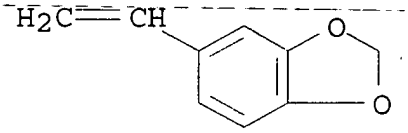
CM 1

CRN 157057-20-0
CMF C12 H16 O2



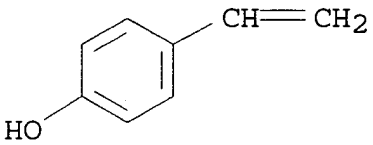
CM 2

CRN 7315-32-4
CMF C9 H8 O2



CM 3

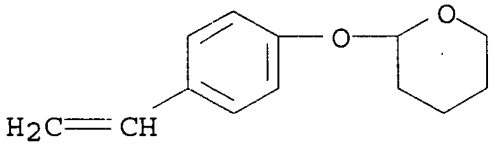
CRN 2628-17-3
CMF C8 H8 O



RN 438535-82-1 HCA
CN Phenol, 4-ethenyl-, polymer with ethenylnaphthalene and 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

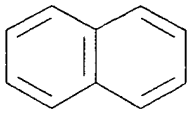
CM 1

CRN 65409-15-6
CMF C13 H16 O2



CM 2

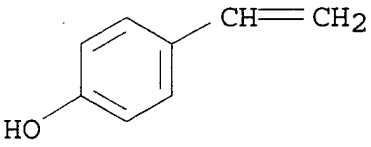
CRN 26588-32-9
CMF C12 H10
CCI IDS



D1— CH═ CH_2

CM 3

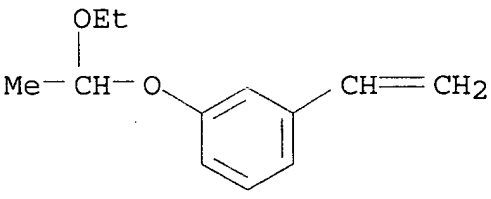
CRN 2628-17-3
CMF C8 H8 O



RN 438535-85-4 HCA
CN Phenol, 3-ethenyl-, polymer with 4-ethenyl-1,2-dimethoxybenzene and 1-ethenyl-3-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

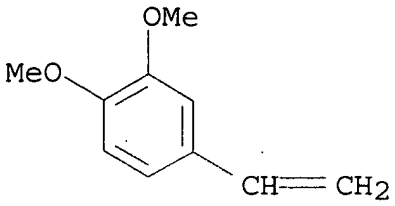
CM 1

CRN 246157-44-8
CMF C12 H16 O2



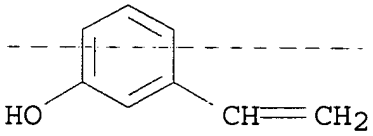
CM 2

CRN 6380-23-0
CMF C10 H12 O2



CM 3

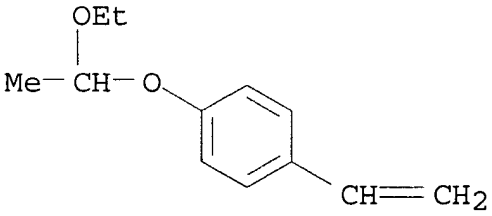
CRN 620-18-8
CMF C8 H8 O



RN 438535-88-7 HCA
CN Benzoic acid, 4-ethenyl-, methyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

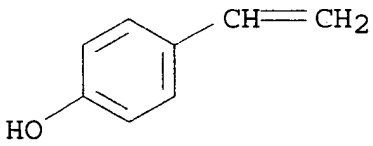
CM 1

CRN 157057-20-0
CMF C12 H16 O2



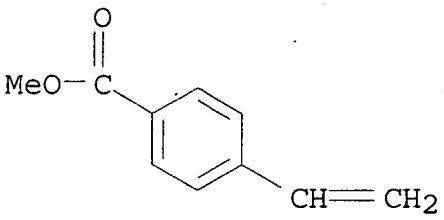
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

CRN 1076-96-6
CMF C10 H10 O2



IC ICM G03F007-039
ICS C07C381-00; C08K005-41; C08L101-12; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST electron beam pos **resist** styrene polymer; x ray pos **resist** styrene polymer; disulfonic acid photoacid generator pos **resist**
IT Electron beam **resists**
X-ray **resists**
(pos.-working; electron-beam or x-ray pos.-working **resists** showing high sensitivity and resoln., and enhanced pattern profiles)
IT 153698-54-5 153698-63-6
(dissoln. inhibitor; electron-beam or x-ray pos.-working **resists** showing high sensitivity and resoln., and enhanced pattern profiles)
IT 109-92-2DP, Ethyl vinyl ether, reaction products with poly(p-hydroxystyrene) 24979-70-2DP, Poly(p-hydroxystyrene), reaction products with Et vinyl ether **158593-28-3P** 200808-68-0P 438535-75-2DP, **hydrolyzed** 438535-77-4P **438535-78-5P 438535-80-9P 438535-82-1P** 438535-83-2P 438535-84-3P **438535-85-4P** 438535-86-5P 438535-87-6P **438535-88-7P**
(electron-beam or x-ray pos.-working **resists** showing high sensitivity and resoln., and enhanced pattern profiles)
IT 1886-74-4 10409-07-1 13603-79-7 58113-98-7 91222-48-9 91222-53-6 124737-97-9 124738-06-3 194712-93-1 426832-92-0
(photoacid generator; electron-beam or x-ray pos.-working **resists** showing high sensitivity and resoln., and enhanced pattern profiles)

L38 ANSWER 4 OF 15 HCA COPYRIGHT 2003 ACS on STN
137:13263 Positive-working electron beam or x-ray **resist** compositions using specific combination of solvents. Uenishi, Kazuya (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002162733 A2 20020607, 62 pp. (Japanese). CODEN: JKXXAF.

APPLICATION: JP 2000-357804 20001124.

AB The **resist** compns., which show good pattern profile, high sensitivity and resoln., and good stabilities to post coating delay and post exposure delay, contain (a) compds. which generate acids upon irradn. with radiation, (b) cationically polymerizable compds., and (c) solvents comprising .gtoreq.1 selected from (A) chain ketones and .gtoreq.1 selected from (B) alkyl lactates, alkyl alkoxypropionates, acetate esters, propylene glycol monoalkyl ethers and/or (C) .gamma.-butyrolactone, ethylene carbonate, and propylene carbonate. The compns. may addnl. contain (d) org: basic compds. and (e) F-contg. surfactants and/or silicone surfactants.

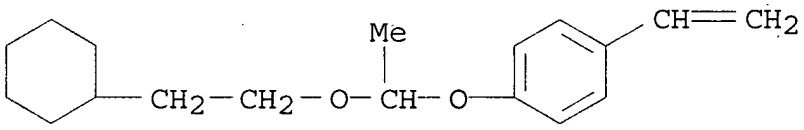
IT **288620-13-3DP**, reaction products with poly(p-hydroxystyrene) (binder; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

RN 288620-13-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

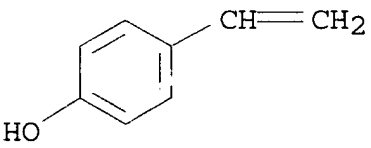
CM 1

CRN 288620-12-2
CMF C18 H26 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-004
ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST pos x ray **resist** solvent combination; electron beam pos **resist** solvent combination; ketone lactate ester solvent pos x ray **resist**; cationically polymerizable monomer pos x ray **resist**; cyclohexyl vinyl ether pos electron beam **resist**

IT Ketones, uses
(chain; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)
IT Surfactants
(fluorine-contg. or siloxanes; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)
IT Solvents
(pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)
IT Electron beam **resists**
X-ray **resists**
(pos.-working; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

IT Polysiloxanes, uses
(surfactants; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)
IT 109-92-2DP, Ethyl vinyl ether, reaction products with poly(p-hydroxystyrene) 24979-70-2DP, VP 8000, reaction products with vinyl ethers 31814-77-4DP, 2-Phenylethyl vinyl ether, reaction products with poly(p-hydroxystyrene) 95418-59-0DP, p-tert-Butoxystyrene-styrene copolymer, **hydrolyzed** 212555-24-3DP, 4-Cyclohexylphenoxyethyl vinyl ether, reaction products with poly(p-hydroxystyrene) **288620-13-3DP**, reaction products with poly(p-hydroxystyrene)
(binder; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)
IT 24979-70-2, VP 8000 142952-62-3, p-(tert-Butoxycarbonylmethoxy)styrene-p-hydroxystyrene copolymer 147625-42-1, Poly(p-hydroxystyrene) tert-butyl carbonate 160309-96-6D, p-Acetoxystyrene-tert-butyl methacrylate copolymer, **hydrolyzed** 177984-03-1 422508-76-7 433289-14-6
(binder; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)
IT 110-87-2, 3,4-Dihydro-2H-pyran 5292-43-3, tert-Butyl bromoacetate 76937-83-2, .alpha.,.alpha.,.alpha.',.alpha.',.alpha.'',.alpha.''-Hexakis(4-hydroxyphenyl)-1,3,5-triethylbenzene 110726-28-8, 1-[.alpha.-Methyl-.alpha.-(4'-hydroxyphenyl)ethyl]-4-[.alpha.',.alpha.'-bis(4''-hydroxyphenyl)ethyl]benzene 148452-55-5, 1,3,3,5-Tetrakis(4-hydroxyphenyl)pentane 153698-47-6, Cumyl bromoacetate
(dissoln. inhibitor from; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)
IT 153698-63-6P 153698-69-2P 196709-88-3P 433289-15-7P
(dissoln. inhibitor; pos.-working electron beam or x-ray

resist compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

IT 65-85-0, Benzoic acid, reactions
(esterification with chloroethyl vinyl ether; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

IT 1131-60-8, p-Cyclohexylphenol
(in binder polymer prepn.; apos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

IT 110-75-8, 2-Chloroethyl vinyl ether
(in binder polymer prepn.; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

IT 3744-08-9P, Triphenylsulfonium iodide
(in prepn. of photoacid generator; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

IT 71-43-2, Benzene, reactions 75-59-2, Tetramethylammonium hydroxide 832-53-1, Pentafluorobenzenesulfonyl chloride 945-51-7, Diphenylsulfoxide 2049-95-8, tert-Amylbenzene 4270-70-6, Triphenylsulfonium chloride
(in prepn. of photoacid generator; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

IT 270564-02-8P, Tetramethylammonium pentafluorobenzenesulfonate
(photoacid generator; pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate 258341-98-9P 270563-93-4P 270563-96-7P
(pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

IT 270563-92-3 279244-43-8 279244-45-0 389859-77-2 398457-16-4 405893-16-5
(pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

IT 41440-39-5P
(pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

IT 484-47-9, 2,4,5-Triphenylimidazole
(pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

IT 50-21-5D, Lactic acid, alkyl esters 57-55-6D, Propylene glycol, monoalkyl ethers 79-33-4D, alkyl esters 96-48-0, .gamma.-Butyrolactone 96-49-1, Ethylene carbonate 97-64-3, Ethyl lactate 108-32-7, Propylene carbonate 110-43-0, 2-Heptanone 123-86-4, Butyl acetate 502-44-3, .epsilon.-Caprolactone

763-69-9, Ethyl 3-ethoxypropionate 765-14-0 929-37-3
1320-67-8, Propylene glycol monomethyl ether 2182-55-0 4223-11-4
25085-99-8, Epikote 825 26256-87-1, 2,5,8,11-Tetraoxatridec-12-ene
50856-25-2 92268-17-2 160768-40-1 212555-24-3
(pos.-working electron beam or x-ray **resist** compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

L38 ANSWER 5 OF 15 HCA COPYRIGHT 2003 ACS on STN
134:303020 Far-UV sensitive positive-working chemically amplified **photoresist** composition for micro photolithography. Sato, Kenichiro; Kodama, Kunihiko; Aogo, Toshiaki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001100421 A2 20010413, 45 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-280202 19990930.

AB The title compn. contains a photoacid generator and a resin increasing the soly. towards an alkali developer by reacting with an acid, wherein the resin has a quaternary ammonium salt group. The addn. of the acid-sensitive resin contg. quaternary ammonium salt group to the compn. provides improved development characteristics and eliminates rough edges on the pattern.

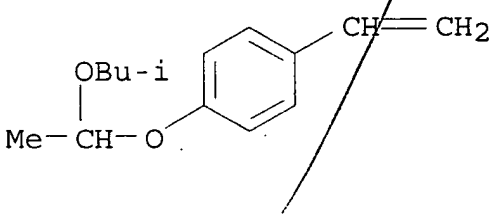
IT **334642-79-4DP**, partially **hydrolyzed**
334642-85-2DP, partially **hydrolyzed**
334643-19-5DP, partially **hydrolyzed**
334643-22-0DP, partially **hydrolyzed**
334643-24-2DP, partially **hydrolyzed**
334643-28-6DP, partially **hydrolyzed**
334643-31-1DP, partially **hydrolyzed**
334643-36-6DP, partially **hydrolyzed**
334643-39-9DP, partially **hydrolyzed**
334643-42-4DP, partially **hydrolyzed**
(resin contg. quaternary ammonium salt group in far-UV sensitive pos.-working chem. amplified **photoresist** compn.)

RN 334642-79-4 HCA

CN Benzenemethanaminium, 4-ethenyl-N,N,N-trimethyl-, salt with 1-methyl 2-sulfobenzoate (1:1), polymer with 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 192314-53-7
CMF C14 H20 O2

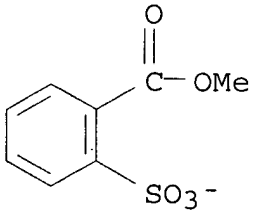


CM 2

CRN 334642-78-3
CMF C12 H18 N . C8 H7 O5 S

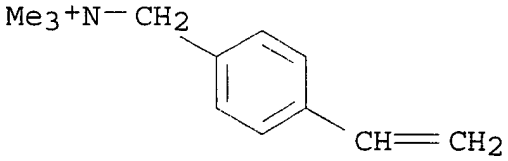
CM 3

CRN 228101-35-7
CMF C8 H7 O5 S



CM 4

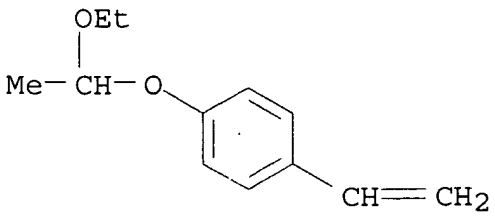
CRN 46231-82-7
CMF C12 H18 N



RN 334642-85-2 HCA
CN Benzenemethanaminium, 4-ethenyl-N,N,N-trimethyl-, salt with 1,3-dimethyl 5-sulfo-1,3-benzenedicarboxylate (1:1), polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

CM 1

CRN 157057-20-0
CMF C12 H16 O2

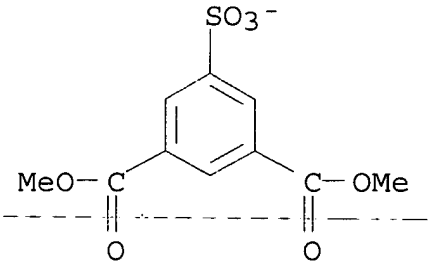


CM 2

CRN 334642-84-1
CMF C12 H18 N . C10 H9 O7 S

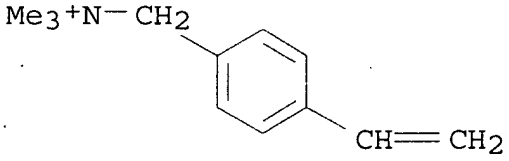
CM 3

CRN 46914-24-3
CMF C10 H9 O7 S



CM 4

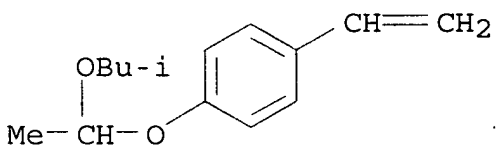
CRN 46231-82-7
CMF C12 H18 N



RN 334643-19-5 HCA
CN Ethanaminium, N-ethyl-N,N-dimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, salt with pentafluorobenzenesulfonic acid (1:1), polymer with 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

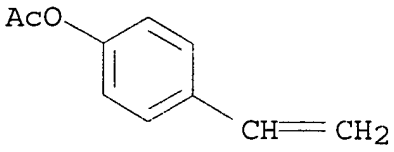
CM 1

CRN 192314-53-7
CMF C14 H20 O2



CM 2

CRN 2628-16-2
CMF C10 H10 O2

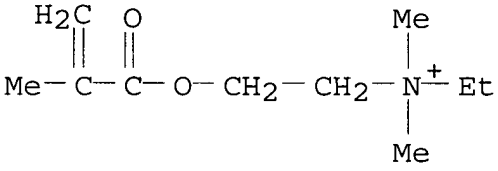


CM 3

CRN 334643-18-4
CMF C10 H20 N O2 . C6 F5 O3 S

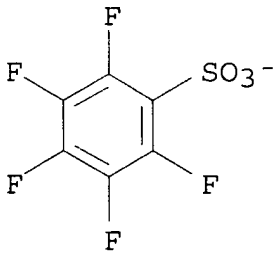
CM 4

CRN 48063-69-0
CMF C10 H20 N O2



CM 5

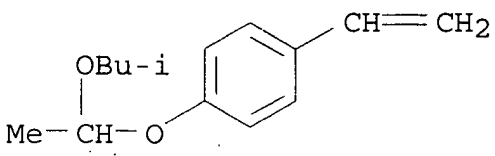
CRN 46377-88-2
CMF C6 F5 O3 S



RN 334643-22-0 HCA
CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, salt with 2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:1), polymer with 1-(1,1-dimethylethyl)-4-ethenylbenzene and 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

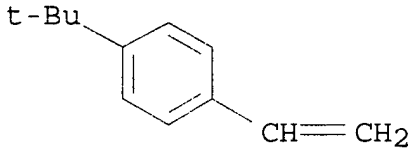
CM 1

CRN 192314-53-7
CMF C14 H20 O2



CM 2

CRN 1746-23-2
CMF C12 H16

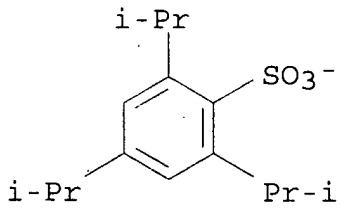


CM 3

CRN 334643-21-9
CMF C15 H23 O3 S . C9 H18 N O2

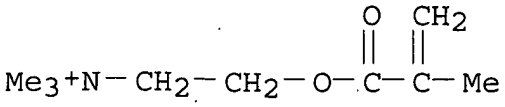
CM 4

CRN 46950-23-6
CMF C15 H23 O3 S



CM 5

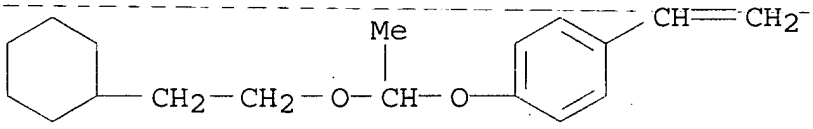
CRN 33611-56-2
CMF C9 H18 N O2



RN 334643-24-2 HCA
CN Benzenemethanaminium, 4-ethenyl-N,N,N-trimethyl-, salt with pentafluorobenzenesulfonic acid (1:1), polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2
CMF C18 H26 O2

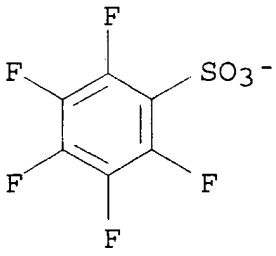


CM 2

CRN 334642-81-8
CMF C12 H18 N . C6 F5 O3 S

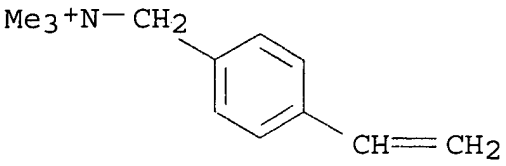
CM 3

CRN 46377-88-2
CMF C6 F5 O3 S



CM 4

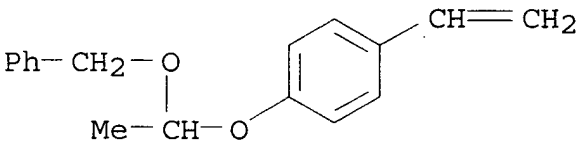
CRN 46231-82-7
CMF C12 H18 N



RN 334643-28-6 HCA
CN Benzenemethanaminium, 4-ethenyl-N,N,N-trimethyl-, salt with 4-methylbenzenesulfonic acid (1:1), polymer with 1-ethenyl-4-[1-(phenylmethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-14-4
CMF C17 H18 O2

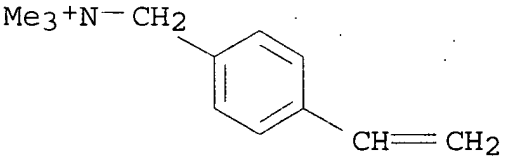


CM 2

CRN 334643-27-5
CMF C12 H18 N . C7 H7 O3 S

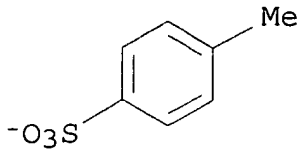
CM 3

CRN 46231-82-7
CMF C12 H18 N



CM 4

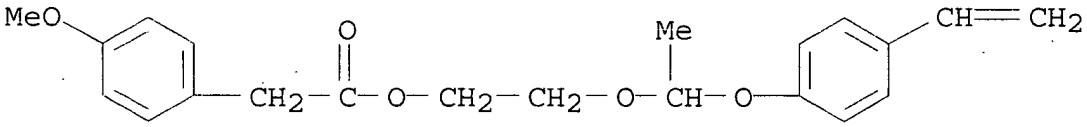
CRN 16722-51-3
CMF C7 H7 O3 S



RN 334643-31-1 HCA
CN Benzenemethanaminium, 4-ethenyl-N,N-diethyl-N-methyl-, salt with 2,4,6-trimethylbenzenesulfonic acid (1:1), polymer with 2-[1-(4-ethenylphenoxy)ethoxy]ethyl 4-methoxybenzeneacetate (9CI) (CA INDEX NAME)

CM 1

CRN 326592-03-4
CMF C21 H24 O5

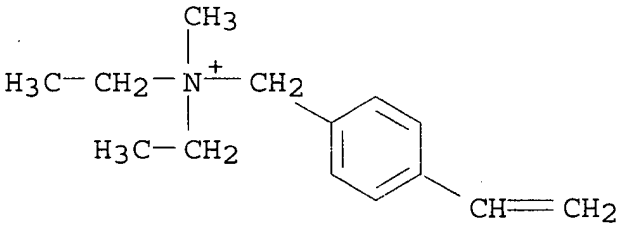


CM 2

CRN 334643-30-0
CMF C14 H22 N . C9 H11 O3 S

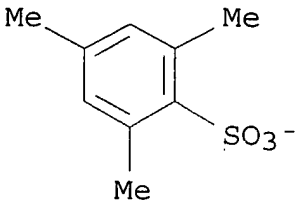
CM 3

CRN 107607-02-3
CMF C14 H22 N



CM 4

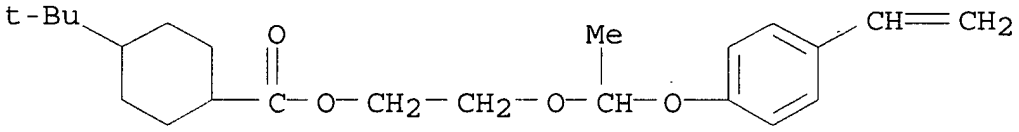
CRN 46149-61-5
CMF C9 H11 O3 S



RN 334643-36-6 HCA
CN Benzenemethanaminium, 4-ethenyl-N,N,N-triethyl-, salt with 2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:1), polymer with 2-[1-(4-ethenylphenoxy)ethoxy]ethyl 4-(1,1-dimethylethyl)cyclohexanecarboxylate (9CI) (CA INDEX NAME)

CM 1

CRN 334643-35-5
CMF C23 H34 O4

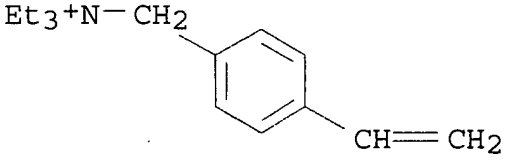


CM 2

CRN 334643-34-4
CMF C15 H24 N . C15 H23 O3 S

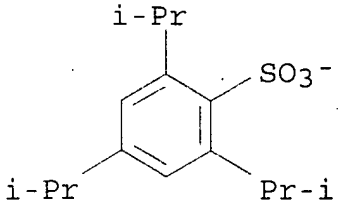
CM 3

CRN 62858-92-8
CMF C15 H24 N



CM 4

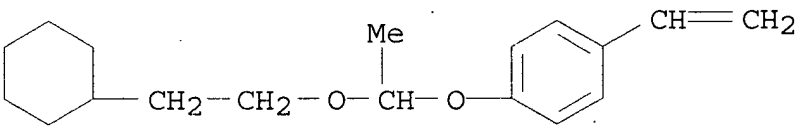
CRN 46950-23-6
CMF C15 H23 O3 S



RN 334643-39-9 HCA
CN Benzenemethanaminium, 4-ethenyl-N,N,N-trimethyl-, salt with 7,7-dimethyl-2-oxobicyclo[2.2.1]heptane-1-methanesulfonic acid (1:1), polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

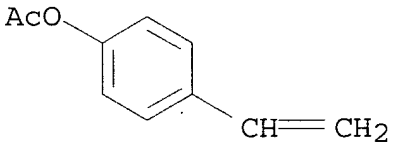
CM 1

CRN 288620-12-2
CMF C18 H26 O2



CM 2

CRN 2628-16-2
CMF C10 H10 O2

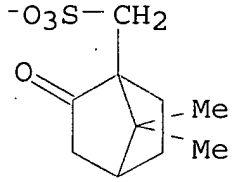


CM 3

CRN 334643-38-8
CMF C12 H18 N . C10 H15 O4 S

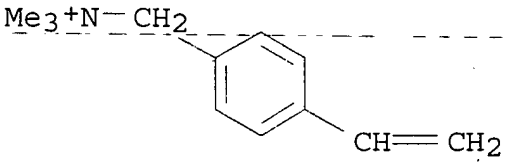
CM 4

CRN 55077-28-6
CMF C10 H15 O4 S



CM 5

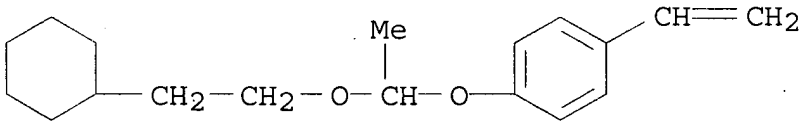
CRN 46231-82-7
CMF C12 H18 N



RN 334643-42-4 HCA
CN Piperidinium, 1-[(4-ethenylphenyl)methyl]-1-methyl-, salt with pentafluorobenzenesulfonic acid (1:1), polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 1-(1,1-dimethylethyl)-4-ethenylbenzene (9CI) (CA INDEX NAME)

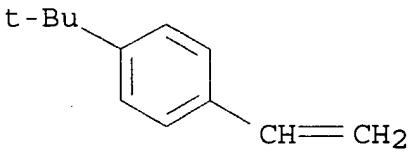
CM 1

CRN 288620-12-2
CMF C18 H26 O2



CM 2

CRN 1746-23-2
CMF C12 H16

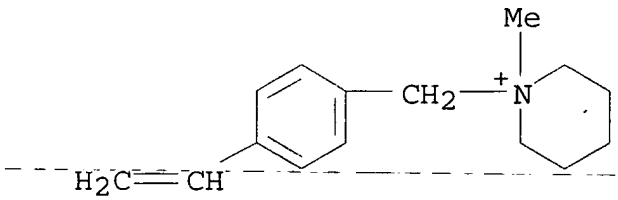


CM 3

CRN 334643-01-5
CMF C15 H22 N . C6 F5 O3 S

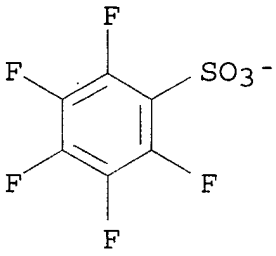
CM 4

CRN 113578-31-7
CMF C15 H22 N



CM 5

CRN 46377-88-2
CMF C6 F5 O3 S



IC ICM G03F007-039
ICS H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST far UV sensitive pos chem amplified **photoresist** compn photolithog
IT Light-sensitive materials
Photolithography
Photoresists
(far-UV sensitive pos.-working **photoresist** compn. for micro photolithog.)
IT Quaternary ammonium compounds, preparation
(far-UV sensitive pos.-working **photoresist** compn. for micro photolithog.)
IT 334642-76-1DP, partially **hydrolyzed 334642-79-4DP**, partially **hydrolyzed** 334642-82-9DP, partially **hydrolyzed 334642-85-2DP**, partially

hydrolyzed 334642-89-6DP, partially **hydrolyzed** 334642-93-2DP, partially **hydrolyzed** 334642-98-7DP, partially **hydrolyzed** 334643-02-6DP, partially **hydrolyzed** 334643-05-9DP, partially **hydrolyzed** 334643-09-3DP, partially **hydrolyzed** 334643-12-8DP, partially **hydrolyzed** 334643-16-2P **334643-19-5DP**, partially **hydrolyzed 334643-22-0DP**, partially **hydrolyzed 334643-24-2DP**, partially **hydrolyzed 334643-28-6DP**, partially **hydrolyzed 334643-31-1DP**, partially **hydrolyzed 334643-36-6DP**, partially **hydrolyzed 334643-39-9DP**, partially **hydrolyzed 334643-42-4DP**, partially **hydrolyzed** 334643-44-6P 334643-47-9P 334643-50-4P 334643-54-8P 334643-57-1P 334643-62-8P 334643-65-1P 334643-69-5P 334643-72-0P 334643-75-3P 334643-78-6P 334666-19-2DP, partially **hydrolyzed** 334666-22-7P 334666-25-0P 334666-27-2P 334666-29-4P
(resin contg. quaternary ammonium salt group in far-UV sensitive pos.-working chem. amplified **photoresist** compn.)

L38 ANSWER 6 OF 15 HCA COPYRIGHT 2003 ACS on STN
134:139209 Positive-working ultraviolet ray-sensitive resin composition and **resist** pattern formation using same. Imai, Kenji; Hasegawa, Takeya (Kansai Paint Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001022067 A2 20010126, 18 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-190434 19990705.

AB The title resin compn. contains (a) a (co)polymer of a p-hydroxy-.alpha.-methylstyrene compd. and optional other copolymerizable unsatd. monomers, (b) a CO2H-contg. resin, (c) an ether bond-contg. olefinic unsatd. compd, and (d) a photoacid generator. The title process comprises the steps of applying the compn. on a substrate to form a UV-sensitive coating, exposing the coating to a UV ray laser beam directly or a UV ray through a **mask** film, and developing the coating. The process may comprise the steps of: (i) coating the compn. on a support to obtain a pos.-working UV ray-sensitive dry film having a UV ray-sensitive layer made of the compn.; (ii) laminating the dry film on a substrate so that the layer is contacted with the substrate; (iii) peeling the support off, if necessary; (iv) exposing the layer to a UV ray laser beam directly or a UV ray through a **mask** film; and (v) developing the layer to form a **resist** pattern. In the latter process, when the support is not peeled off in step (iii), the layer may be developed after peeling the support off to form a pattern. The compn. useful as a **resist** provides high resoln. **resist** patterns.

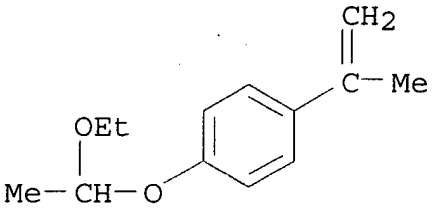
IT **216573-41-0P**
(prepn. and **hydrolysis** of)

RN 216573-41-0 HCA

CN Benzene, 1-(1-ethoxyethoxy)-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 216573-39-6
CMF C13 H18 O2



IC ICM G03F007-039
ICS G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

ST UV **resist** hydroxymethyl styrene copolymer; carboxy resin pos **photoresist**; ether olefin **photoresist**

IT **Photoresists**
(UV, pos.; **photoresist** compn. contg. hydroxymethylstyrene copolymer, carboxy-contg. resin, olefin with ether bond, and photoacid generator)

IT 85342-62-7
(acid generator; **photoresist** compn. contg. hydroxymethylstyrene copolymer, carboxy-contg. resin, olefin with ether bond, and photoacid generator)

IT 80-05-7DP, Bisphenol A, reaction products with chloroethyl vinyl ether 110-75-8DP, 2-Chloroethyl vinyl ether, reaction products with bisphenol A 764-48-7DP, 2-Hydroxyethyl vinyl ether, reaction products with isocyanate compd. 25067-83-8P, Acrylic acid-butyl acrylate-2-hydroxyethyl acrylate-styrene copolymer 28805-80-3DP, Tolylene diisocyanate trimethylolpropane adduct (3:1), reaction products wit hydroxyethyl vinyl ether 51032-74-7P, Poly(p-hydroxy-.alpha.-methylstyrene) 62385-58-4P 321336-83-8P
(**photoresist** compn. contg. hydroxymethylstyrene copolymer, carboxy-contg. resin, olefin with ether bond, and photoacid generator)

IT **216573-41-0P**
(prepn. and **hydrolysis** of)

L38 ANSWER 7 OF 15 HCA COPYRIGHT 2003 ACS on STN
134:123579 Positive-working visible ray-sensitive resin composition and **resist** pattern formation using same. Imai, Kenji; Kogure, Hideo (Kansai Paint Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001022068 A2 20010126, 18 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-190435 19990705.

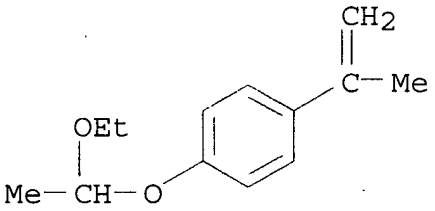
AB The title resin compn. contains (a) a (co)polymer of a p-hydroxy-.alpha.-methylstyrene compd. and optional other copolymerizable unsatd. monomers, (b) a CO2H-contg. resin, (c) an

ether bond-contg. olefinic unsatd. compd, (d) a photoacid generator, and (e) a photosensitizer. The title process comprises the steps of applying the compn. on a substrate to form a visible ray-sensitive coating, exposing the coating to a visible ray laser beam directly or a visible ray through a **mask** film, and developing the coating to form a **resist** pattern. The process may comprise the steps of: (i) coating the compn. on a support to obtain a pos.-working visible ray-sensitive dry film having a visible ray-sensitive layer made of the compn.; (ii) laminating the dry film on a substrate so that the layer is contacted with the substrate; (iii) peeling the support off, if necessary; (iv) exposing the layer to a visible ray laser beam directly or a visible ray through a **mask** film; and (v) developing the layer to form a **resist** pattern. In the latter process, when the support is not peeled off in step (iii), the layer may be developed after peeling the support off to form a pattern. The compn. useful as a **resist** provides high resoln. **resist** patterns.

IT **216573-41-0P**
(prepn. and **hydrolysis** of)
RN 216573-41-0 HCA
CN Benzene, 1-(1-ethoxyethoxy)-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 216573-39-6
CMF C13 H18 O2



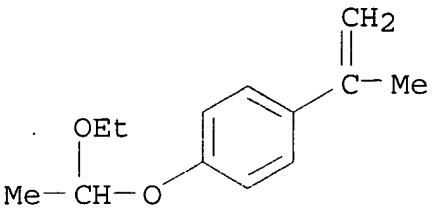
IC ICM G03F007-039
ICS G03F007-004; H05K003-06
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
ST visible ray **resist** hydroxymethylstyrene copolymer; ether olefin **photoresist**; carboxy resin **photoresist**; photoacid generator sensitizer **photoresist**
IT **Resists**
(pos.-working; **photoresist** compn. contg. hydroxymethylstyrene copolymer, carboxy-contg. resin, olefin with ether bond, and photoacid generator)
IT 85342-62-7
(acid generator; **photoresist** compn. contg. hydroxymethylstyrene copolymer, carboxy-contg. resin, olefin with

ether bond, and photoacid generator)
IT 80-05-7DP, Bisphenol A, reaction products with chloroethyl vinyl ether 110-75-8DP, 2-Chloroethyl vinyl ether, reaction products with bisphenol A 764-48-7DP, 2-Hydroxyethyl vinyl ether, reaction products with isocyanate compd. 25067-83-8P, Acrylic acid-butyl acrylate-2-hydroxyethyl acrylate-styrene copolymer 28805-80-3DP, Tolylene diisocyanate trimethylolpropane adduct (3:1), reaction products wit hydroxyethyl vinyl ether 51032-74-7P, Poly(p-hydroxy-.alpha.-methylstyrene) 62385-58-4P 321336-83-8P
(**photoresist** compn. contg. hydroxymethylstyrene copolymer, carboxy-contg. resin, olefin with ether bond, and photoacid generator)
IT **216573-41-0P**
(prepn. and **hydrolysis** of)
IT 63226-13-1
(sensitizer; **photoresist** compn. contg. hydroxymethylstyrene copolymer, carboxy-contg. resin, olefin with ether bond, and photoacid generator)

L38 ANSWER 8 OF 15 HCA COPYRIGHT 2003 ACS on STN
134:123575 Positive-working heat-sensitive resin composition and **resist** pattern formation using same. Imai, Kenji; Kogure, Hideo (Kansai Paint Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001022057 A2 20010126, 17 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-190436 19990705.
AB The title resin compn. contains (a) a (co)polymer of a p-hydroxy-.alpha.-methylstyrene compd. and optional other copolymerizable unsatd. monomers, (b) a CO2H-contg. resin, (c) an ether bond-contg. olefinic unsatd. compd, and (d) a heat-acid generator. The title process comprises the steps of applying the compn. on a substrate to form a heat-sensitive coating, exposing the coating to a heat ray laser beam directly or through a **mask** film, and developing the coating to form a **resist** pattern. The process may comprise the steps of: (i) coating the compn. on a support to obtain a pos.-working heat-sensitive dry film having a heat-sensitive layer made of the compn.; (ii) laminating the dry film on a substrate so that the layer is contacted with the substrate; (iii) peeling the support off, if necessary; (iv) exposing the layer to a heat ray laser beam directly or through a **mask** film; and (v) developing the layer to form a **resist** pattern. In the later process, when the support is not peeled off in step (iii), the layer may be developed after peeling the support off to form a pattern. The compn. useful as a **resist** provides high resoln. **resist** patterns.
IT **216573-41-0P**
(prepn. and **hydrolysis** of)
RN 216573-41-0 HCA
CN Benzene, 1-(1-ethoxyethoxy)-4-(1-methylethenyl)-, homopolymer (9CI) (CA INDEX NAME)

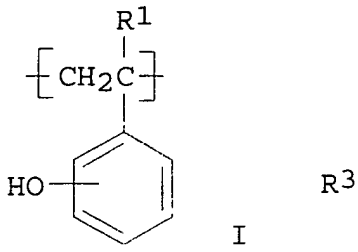
CM 1

CRN 216573-39-6
CMF C13 H18 O2

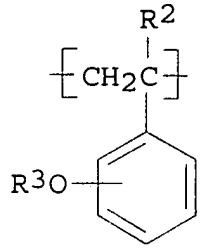


IC ICM G03F007-004
ICS G03F007-004; G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
ST heat sensitive **resist** hydroxymethylstyrene copolymer; carboxy group resin heat sensitive **resist**; olefin ether **resist** compn
IT **Resists**
(heat-sensitive; heat-sensitive pos. **resist** compn. contg. hydroxy-.alpha.-methylstyrene polymer, carboxy-contg. resin, acid generator and olefin compd.)
IT 85342-62-7
(acid generator; heat-sensitive pos. **resist** compn. contg. hydroxy-.alpha.-methylstyrene polymer, carboxy-contg. resin, acid generator and olefin compd.)
IT 80-05-7DP, Bisphenol A, reaction products with chloroethyl vinyl ether 110-75-8DP, 2-Chloroethyl vinyl ether, reaction products with bisphenol A 764-48-7DP, 2-Hydroxyethyl vinyl ether, reaction products with isocyanate compd. 25067-83-8P, Acrylic acid-butyl acrylate-2-hydroxyethyl acrylate-styrene copolymer 28805-80-3DP, Tolylene diisocyanate trimethylolpropane adduct (3:1), reaction products wit hydroxyethyl vinyl ether 51032-74-7P, Poly(p-hydroxy-.alpha.-methylstyrene) 62385-58-4P 321336-83-8P, Dimethylolbutanoic acid-trimethylhexamethylene diisocyanate-tripropylene glycol copolymer
(heat-sensitive pos. **resist** compn. contg. hydroxy-.alpha.-methylstyrene polymer, carboxy-contg. resin, acid generator and olefin compd.)
IT **216573-41-0P**
(prepn. and **hydrolysis** of)

L38 ANSWER 9 OF 15 HCA COPYRIGHT 2003 ACS on STN
133:81569 Radiation-sensitive resin composition useful as chemically amplified positive-working **resist**. Kobayashi, Eiichi; Nishiyama, Satoru; Yata, Yuji (Jsr Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000181066 A2 20000630, 23 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-361467 19981218.
GI



I



II

AB The title resin compn. contains a copolymer having repeating units I and II (R1, R2 = H or Me; R3 = C4-10 tert-alkyl) which is obtained by cationic polymn. and a radiation-sensitive acid generator. The compn. shows high sensitivity toward various kinds of radiation such as UV rays, far UV rays, charging particle radiation, and x-ray and stability in post exposure delay and provides high resoln. **resist** patterns with good profile and without roughness.

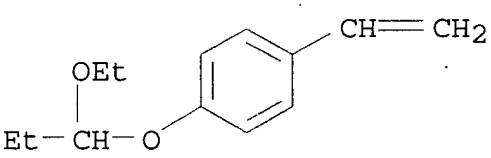
IT **278601-64-2P**
(radiation-sensitive **resist** compn. contg. polyhydroxystyrene deriv. and acid generator)

RN 278601-64-2 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxypropoxy)benzene and 1-ethenyl-4-(1-methoxyethoxy)benzene (9CI) (CA INDEX NAME)

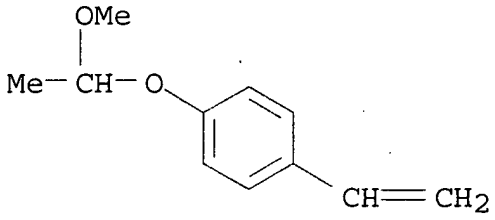
CM 1

CRN 192314-49-1
CMF C13 H18 O2



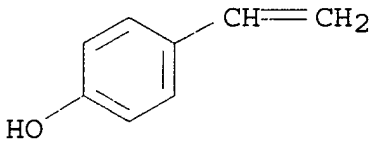
CM 2

CRN 151189-10-5
CMF C11 H14 O2



CM 3

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-039
ICS H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
ST radiation **resist** polyhydroxystyrene deriv cationic polymn; acid generator radiation **resist**
IT **Resists**
(radiation-sensitive; radiation-sensitive **resist** compn. contg. polyhydroxystyrene deriv. and acid generator)
IT 109-92-2DP, Ethyl vinyl ether, ethers with polyhydroxystyrene 926-66-9DP, Ethyl isopropenyl ether, ethers with polyhydroxystyrene 24979-70-2DP, Poly(p-hydroxystyrene), ethers 123589-22-0P, p-tert-Butoxystyrene-p-hydroxystyrene copolymer 147625-42-1DP, Poly(p-hydroxystyrene) tert-butylcarbonate, ethers 187601-74-7DP, Poly(tert-butoxystyrene), **hydrolyzed**, ethers **278601-64-2P**
(radiation-sensitive **resist** compn. contg. polyhydroxystyrene deriv. and acid generator)

L38 ANSWER 10 OF 15 HCA COPYRIGHT 2003 ACS on STN
132:173395 Radiation-sensitive composition for chemically amplified **photoresist**. Pawlowski, Georg; Okazaki, Hiroshi; Kinoshita, Yoshiaki; Tsugama, Naoko; Hishida, Aritaka; Ma, Xiao-ming; Yamaguchi, Yuko (Clariant International Ltd., Switz.). PCT Int. Appl. WO 2000008525 A1 20000217, 133 pp. DESIGNATED STATES: W: CN, JP, KR, SG, US; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (Japanese). CODEN: PIXXD2. APPLICATION: WO 1999-JP4304 19990809. PRIORITY: JP 1998-225029 19980807; JP

1999-87036 19990329.

AB A chem. amplification-type radiation-sensitive compn. comprising a film-forming resin based on a hydroxystyrene in combination with an onium salt precursor capable of generating a fluorinated alkanesulfonic acid as a radiation-sensitive acid-generating agent. This compn. is free from the occurrence of corrosion of an app. owing to outgassing, the formation of a T-type pattern and the change of line width caused by a delay of processing time, and can be used for achieving a high sensitivity and resolving power and a good and stable pattern formation.

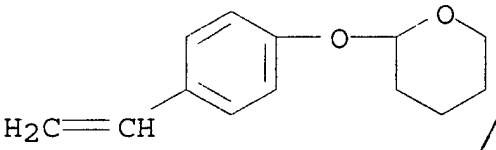
IT **258871-97-5P**, 4-Hydroxystyrene-4-tetrahydropyranyloxystyrene-.alpha.,.omega.-triethyleneglycol divinyl ether copolymer (radiation-sensitive compn. for chem. amplified **photoresist**)

RN 258871-97-5 HCA

CN Phenol, 4-ethenyl-, polymer with 2-(4-ethenylphenoxy)tetrahydro-2H-pyran and 3,6,9,12-tetraoxatetradeca-1,13-diene (9CI) (CA INDEX NAME)

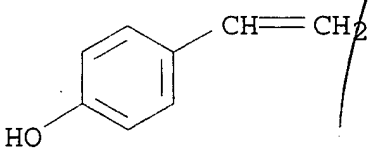
CM 1

CRN 65409-15-6
CMF C13 H16 O2



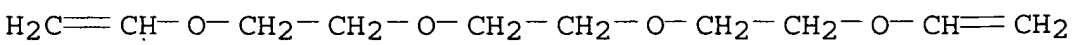
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

CRN 765-12-8
CMF C10 H18 O4



IC ICM G03F007-004
ICS G03F007-039; G03F007-038; C07C381-12; C07C309-06
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST radiation sensitive compn chem amplification **resist**
IT **Photoresists**
(radiation-sensitive compn. for chem. amplified **photoresist**)
IT Onium compounds
(radiation-sensitive compn. for chem. amplified **photoresist**)
IT 258871-80-6P, Tris(4-hydroxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate
(radiation-sensitive compn. for chem. amplified **photoresist**)
IT 76-05-1P, preparation 108-90-7P, Chlorobenzene, preparation 109-92-2DP, Ethylvinyl ether, reaction product with functionalized styrene polymer 110-75-8DP, 2-Chloroethylvinyl ether, reaction product with 4-hydroxystyrene homopolymer 536-80-1P, Iodosylbenzene 827-52-1P, Cyclohexylbenzene 2628-17-3P 5292-43-3DP, tert-Butylbromoacetate, reaction product with **hydrolyzed** 4-tert-Bu polymer 7758-05-6P, Potassium iodate 12124-97-9P, Ammonium bromide 18995-35-2P 24979-70-2DP, 4-Hydroxystyrene homopolymer, reaction product with functionalized vinyl compd. 34619-03-9DP, Di-tert-butylcarbonate, reaction product with 4-hydroxystyrene homopolymer 68734-62-3P, Trimethylsilylnonafluorobutanesulfonate 94287-61-3P 129361-29-1P 130100-38-8P 133685-94-6P 135648-85-0P, 4-Hydroxystyrene-4-methoxystyrene copolymer 144317-44-2P, Triphenylsulfonium nonafluorobutanesulfonate 155040-27-0P, 4-Hydroxystyrene-tert-butyl methacrylate copolymer 158401-89-9P 174476-25-6DP, 4-Acetoxystyrene-4-tert-butyl acrylate copolymer, **hydrolyzed**, reaction products with Et vinyl ether 175610-67-0P 176747-00-5P, Diphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 204065-67-8DP, 4-Hydroxystyrene-4-methylstyrene copolymer, reaction product with ethoxy vinyl ether 241806-75-7P, Tris(4-tert-butylphenyl)sulfonium nonafluorobutanesulfonate 258871-76-0P, Tris(4-tert-butylphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-78-2P, Tri(4-t-butoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-81-7P, Tris(4-tert-butoxycarbonylmethoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-83-9P, .beta.-Oxocyclohexyl 2-norbonylmethyl sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-84-0P, Bis(4-cyclohexylphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-85-1P, 4-Methylphenylphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-86-2P, Bis(4-tert-butoxyphenyl)phenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-88-4P, Bis(4-methylphenyl)-4-cyclohexylphenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-89-5P, Tris(4-

chlorophenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-90-8P, 4-Hydroxy-3,5-dimethylphenyldiphenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-91-9P, Di(4-t-butyloxyphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-94-2P, Di(4-tert-butylcarbonyloxymethyloxyphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-95-3P, 4-tert-Butylphenylphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate **258871-97-5P**, 4-Hydroxystyrene-4-tetrahydropyranyloxystyrene-.alpha.,.omega.-triethyleneglycol divinyl ether copolymer 258871-99-7P, Tris(tert-butylcarbonylmethyloxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258872-01-4P, Bis(4-cyclohexylphenyl)phenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258872-02-5P, 4-Hydroxystyrene-4-tert-butyloxycarbonyloxystyrene-tert-butyl methacrylate copolymer 258872-05-8P, Diphenyl 4-tert-butylphenylsufonium nonafluorobutanesulfonate 258872-08-1P, Tris(4-butoxyphenyl)sulfonium nonafluorobutanesulfonate 258872-10-5P, Tris(4-tert-butoxycarbonylmethoxyphenyl)sulfonium nonafluorobutanesulfonate 258872-13-8P 258872-14-9P, Bis(4-cyclohexylphenyl)iodonium nonafluorobutylsulfonate 258872-15-0DP, 4-Acetoxystyrene-styrene-tert-butyl methacrylate copolymer, reaction products with hydroxystyrene polymer deriv. 258873-04-0P, Bis(4-hydroxyphenyliodonium) 3,3,3,2,1,1-hexafluoropropanesulfonate
(radiation-sensitive compn. for chem. amplified **photoresist**)

IT 67-68-5, Dimethyl sulfoxide, reactions 71-43-2, Benzene, reactions 75-75-2, Methanesulfonic acid 107-59-5, tert-Butyl chloroacetate 357-31-3 375-73-5 507-19-7, tert-Butyl bromide 591-50-4, Iodobenzene 945-51-7, Diphenylsulfoxide 3085-42-5, 4,4'-Dichlorophenyl sulfoxide 5292-43-3, tert-Butylbromoacetate 29342-65-2, 2-Bromonorbornane 137455-55-1, Tris(4-tert-butoxyphenyl)sulfonium 170632-59-4, Bis(4-tert-butoxyphenyl)sulfoxide 258872-06-9, Diphenyl 4-tert-butylphenylsufonium bromide 258872-11-6, Tris-4(tert-butoxyphenyl)sulfonium nonafluorobutanesulfonate 263871-53-0
(radiation-sensitive compn. for chem. amplified **photoresist**)

IT 216679-67-3, Megafac R 08 258871-96-4, 4-Hydroxystyrene-styrene-tert-butyl methacrylate copolymer
(radiation-sensitive compn. for chem. amplified **photoresist**)

L38 ANSWER 11 OF 15 HCA COPYRIGHT 2003 ACS on STN
131:358258 Dissolution inhibitor of chemically amplified **photoresist** and **photoresist** composition. Choi, Sang-Jun (Samsung Electronics Co. Ltd., S. Korea). Ger. Offen. DE 19843089 A1 19991125, 16 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1998-19843089 19980921. PRIORITY: KR 1998-18201 19980520.

AB The chem. amplified **photoresist** dissoln. inhibitor has an acid-instable di-alkylmalonate group as a functional group combined with a C1-40-hydrocarbon. The dissoln. inhibitor is represented by a general formula R1(CH(CO2R2)2)m [m = 1, 2; R1 = C1-40-hydrocarbon selected from cyclohexyl, dimethylcyclohexyl, xylenyl, and naphthalenylmethyl; R2 = tert-Bu, tetrahydroxypyranyl, trimethylsilyl]. The photosensitive polymer is either copolymer, terpolymer or tetrapolymer comprised of di-alkylmalonylmethylstyrene, alkoxystyrene deriv., acrylate deriv., hydroxystyrene and/or hydroxystyrene deriv. The **photoresist** compn. shows high contrast and good profiles.

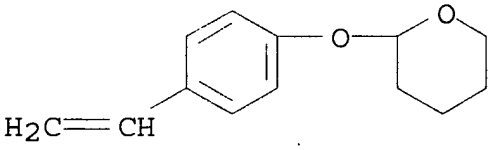
IT **125325-82-8P**, p-Tetrahydropyranyloxystyrene-p-hydroxystyrene copolymer
(in chem. amplified **photoresist** compn.)

RN 125325-82-8 HCA

CN Phenol, 4-ethenyl-, polymer with 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

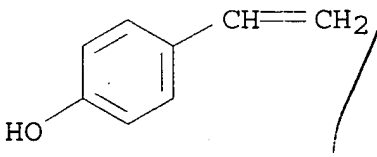
CM 1

CRN 65409-15-6
CMF C13 H16 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-00

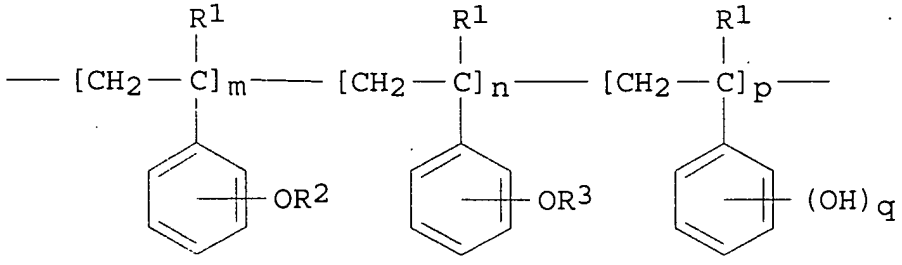
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76

ST dissoln inhibitor chem amplified **photoresist**

IT **Photoresists**
Semiconductor device fabrication
(dissoln. inhibitor of chem. amplified **photoresist** and **photoresist** compn.)

IT 250709-36-5P 250709-37-6P
(dissoln. inhibitor of chem. amplified **photoresist**)
IT 109-92-2DP, Ethyl vinyl ether, reaction products with poly(p-hydroxystyrene) 24979-70-2DP, Poly(p-hydroxystyrene), reaction products with Et vinyl ether
(in chem. amplified **photoresist** compn.)
IT **125325-82-8P**, p-Tetrahydropyranyloxystyrene-p-hydroxystyrene copolymer 147625-42-1P 174476-25-6DP, p-Acetoxystyrene-tert-butyl acrylate copolymer, **hydrolyzed** 188884-99-3DP, p-Acetoxystyrene-p-di-(tert-butyl)malonylmethylstyrene copolymer, **hydrolyzed** 221524-18-1DP, **hydrolyzed** 247098-44-8DP, **hydrolyzed** 247098-48-2DP, **hydrolyzed** 250709-38-7DP, **hydrolyzed**
(in chem. amplified **photoresist** compn.)
IT 1592-20-7, p-Chloromethylstyrene
(prepn. of di-tert-butylmalonylmethylstyrene for chem. amplified **photoresist**)
IT 152087-41-7P
(prepn. of di-tert-butylmalonylmethylstyrene for chem. amplified **photoresist**)
IT 541-16-2, Di-tert-butylmalonate 623-24-5, .alpha.,.alpha.'-Dibromo-p-xylene 35076-92-7, 1,4-Dibromocyclohexane
(prepn. of dissoln. inhibitor of chem. amplified **photoresist**)

L38 ANSWER 12 OF 15 HCA COPYRIGHT 2003 ACS on STN
127:270471 Alkali-developable chemical-enhanced positive-working **resist** material showing high-sensitivity to high energy ray. Watanabe, Satoshi; Watanabe, Osamu; Nagura, Shigehiro; Ishihara, Toshinobu (Shin-Etsu Chemical Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 09211866 A2 19970815 Heisei, 34 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-266776 19960917. PRIORITY: JP 1995-287944 19951009; JP 1995-287945 19951009; JP 1995-337900 19951201; JP 1995-337901 19951201.
GI



I

AB The title **resist** material comprises (1) an org. solvent,

(2) a polymer I (R1 = H, CH3; R2, R3 = acid-unstable group; 0.02 .ltoreq. m/(m+n+p) .ltoreq. 0.5; 0.01 .ltoreq. n/(m+n+p) .ltoreq. 0.3; 0 < (m+n)/(m+n+p) .ltoreq. 0.8; q = 1-3), with a wt. av. mol. wt. 3,000-300,000, (3) an acid-generator, and further (4) a dissoln. prohibiter.

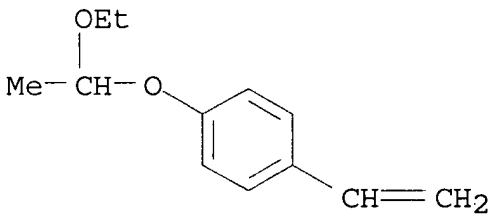
IT **177034-75-2P**, p-t-Butoxycarbonyloxy styrene; p-1-ethoxyethoxy styrene; p-vinyl phenol copolymer **195723-88-7P 195723-89-8P**
(prepd. and contained in alk.-developable chem.-enhanced pos.-working **resist** material)

RN 177034-75-2 HCA

CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

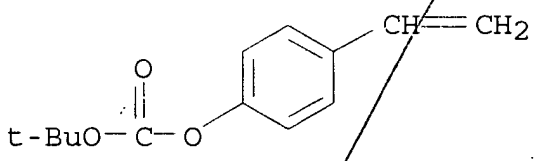
CM 1

CRN 157057-20-0
CMF C12 H16 O2



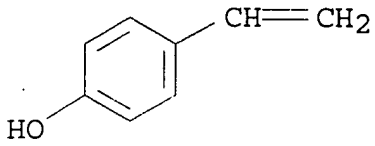
CM 2

CRN 87188-51-0
CMF C13 H16 O3



CM 3

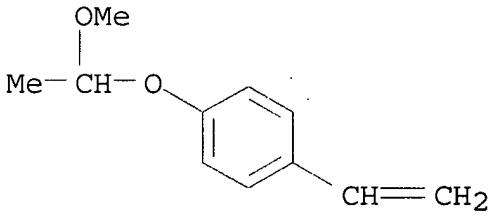
CRN 2628-17-3
CMF C8 H8 O



RN 195723-88-7 HCA
CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with 1-ethenyl-4-(1-methoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

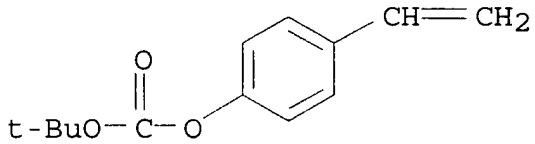
CM 1

CRN 151189-10-5
CMF C11 H14 O2



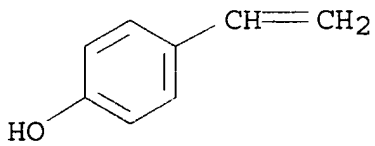
CM 2

CRN 87188-51-0
CMF C13 H16 O3



CM 3

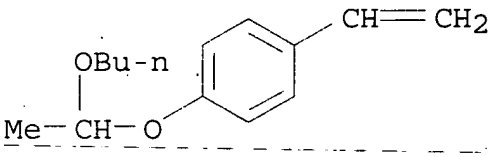
CRN 2628-17-3
CMF C8 H8 O



RN 195723-89-8 HCA
CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with 1-(1-butoxyethoxy)-4-ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

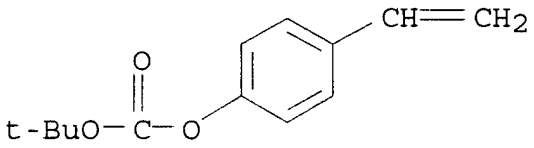
CM 1

CRN 170635-32-2
CMF C14 H20 O2



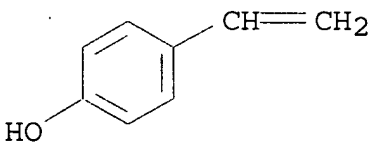
CM 2

CRN 87188-51-0
CMF C13 H16 O3



CM 3

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-039
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST alk developable chem enhanced **resist**; pos working **resist** material
IT Positive **photoresists**
(alk.-developable, chem.-enhanced; contg. specified polymer)

IT 186769-14-2, 4-(1-Ethoxy-1-methylethoxy)styrene; 4-hydroxystyrene copolymer
(1dissoln. prohibiter for alk.-developable chem.-enhanced pos.-working **resist** material)
IT 117458-06-7 157089-24-2 161453-44-7 162102-77-4 170632-61-8 180801-55-2 186769-06-2 186769-08-4 195723-93-4 195723-94-5
(acid-generator for alk.-developable chem.-enhanced pos.-working **resist** material)
IT 62-53-3, Benzenamine, uses 95-84-1, 2-Amino-p-cresol 102-71-6, uses 110-18-9 110-89-4, Piperidine, uses 120-73-0, Purine 127-19-5, N,N-Dimethylacetamide 142-08-5, 2(1H)-Pyridinone 872-50-4, N-Methyl pyrrolidone, uses 4458-32-6, Methyl ethyl propyl amine 34521-19-2, Pyridine sulfonic acid
(alkali-developable chem.-enhanced pos.-working **resist** material showing high-sensitivity to high energy ray)
IT 108-00-9 110-60-1, 1,4-Butanediamine
(basic compd. for alk.-developable chem.-enhanced pos.-working **resist** material)
IT 574-00-5D, Naphthalene-1,2-diol, t-butoxy carbonyl partially substituted 1620-68-4D, t-butoxy carbonyl partially substituted 7583-20-2D, t-butoxy carbonyl partially substituted 9016-83-5D, Cresol-formaldehyde copolymer, t-butoxy carbonyl partially substituted 18066-45-0D, t-butoxy carbonyl partially substituted 24979-70-2, 4-Hydroxystyrene homopolymer 24979-70-2D, 4-Hydroxystyrene homopolymer, t-butoxy carbonyl partially substituted 104105-16-0D, t-butoxy carbonyl partially substituted 123589-22-0, 4-tert-Butoxystyrene-4-hydroxystyrene copolymer 125325-82-8, 4-(2-Tetrahydropyranyloxy)styrene; 4-hydroxystyrene copolymer 128595-64-2D, t-butoxy carbonyl partially substituted 129674-22-2, 4-tert-Butoxycarbonyloxystyrene-4-hydroxystyrene copolymer 151319-83-4D, ethoxy Et partially substituted 158593-28-3, 4-(1-Ethoxyethoxy)styrene; 4-hydroxystyrene copolymer 168766-36-7D, t-butoxy carbonyl partially substituted 186769-12-0, 4-(1-Butoxyethoxy)styrene; 4-hydroxystyrene copolymer 186848-70-4D, t-butoxy carbonyl partially substituted 186848-71-5D, t-butoxy carbonyl partially substituted
(dissoln. prohibiter for alk.-developable chem.-enhanced pos.-working **resist** material)
IT 109-53-5DP, reaction product with **hydrolyzed** p-t-butoxy styrene homopolymer and then being butylated 109-92-2DP, reaction product with **hydrolyzed** p-t-butoxy styrene homopolymer and then being butylated 764-47-6DP, Propyl vinyl ether, reaction product with **hydrolyzed** p-t-butoxy styrene homopolymer and then being butylated 926-02-3DP, reaction product with **hydrolyzed** p-t-butoxy styrene homopolymer and then being butylated 928-55-2DP, Ethyl propenyl ether, reaction product with **hydrolyzed** p-t-butoxy styrene homopolymer and then being butylated 2182-55-0DP, reaction product with **hydrolyzed** p-t-butoxy styrene homopolymer and then being butylated 7319-16-6DP, Methyl propenyl ether, reaction product with **hydrolyzed** p-t-butoxy styrene homopolymer and then being butylated 24424-99-5DP, Di-tert-butyl dicarbonate, reaction

product with **hydrolyzed** and ethylated p-t-butoxy styrene homopolymer 95418-60-3DP, p-tErt-Butoxystyrene homopolymer, **hydrolyzed**, alkylated **177034-75-2P**, p-t-Butoxycarbonyloxy styrene; p-1-ethoxyethoxy styrene; p-vinyl phenol copolymer **195723-88-7P 195723-89-8P** 195723-90-1DP, reaction product with **hydrolyzed** p-t-butoxy styrene homopolymer and then being butylated (prepd. and contained in alk.-developable chem.-enhanced pos.-working **resist** material)

L38 ANSWER 13 OF 15 HCA COPYRIGHT 2003 ACS on STN
127:42277 Positive-working **photoresist** composition showing high resolution power. Aoso, Toshiaki; Fujimori, Toru; Yamanaka, Hitoshi; Uenishi, Kazuya (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 09106073 A2 19970422 Heisei, 56 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-261635 19951009.

AB The compn. contains (i) a resin contg. a basic N and an acid-decomposable group and (ii) an acid generator sensitive to active/radiation beam. The resin may contain CH2CR1C6H4OH, CH2CR1C6H4OR2, and CH2CR1X or CH2CR1C6H4Y [R1 = H, Me; R2 = an acid-decomposable group; X = a basic-N-contg. heterocycle, CONHR3Z, CO2R3Z (Z = a basic-N-contg. group; R3 = alkylene, arylene); Y = a basic-N-contg. group].

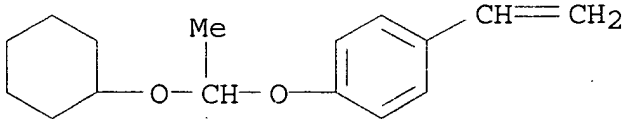
IT **190434-68-5P 190434-69-6P 190434-70-9P 190434-76-5P 190612-94-3P 190612-95-4P 190677-60-2P**
(alk.-developable pos.-working **photoresist** compn. showing high resoln. power)

RN 190434-68-5 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(cyclohexyloxy)ethoxy]-4-ethenylbenzene and 4-ethenylpyridine (9CI) (CA INDEX NAME)

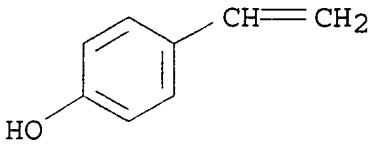
CM 1

CRN 190434-67-4
CMF C16 H22 O2



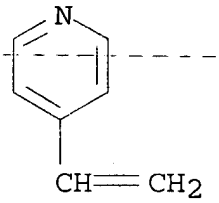
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

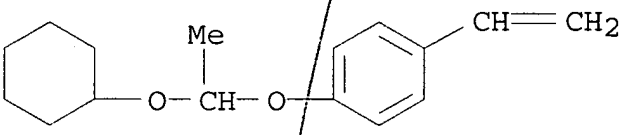
CRN 100-43-6
CMF C7 H7 N



RN 190434-69-6 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(cyclohexyloxy)ethoxy]-4-ethenylbenzene and 2-ethenylpyridine (9CI) (CA INDEX NAME)

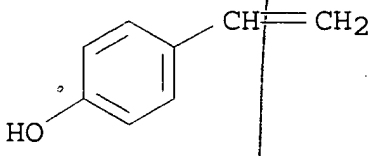
CM 1

CRN 190434-67-4
CMF C16 H22 O2



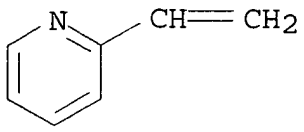
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

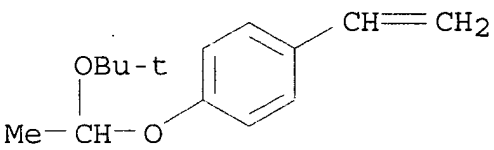
CRN 100-69-6
CMF C7 H7 N



RN 190434-70-9 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(1,1-dimethylethoxy)ethoxy]-4-ethenylbenzene and 4-ethenylpyridine (9CI) (CA INDEX NAME)

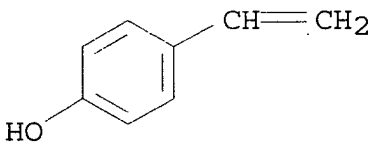
CM 1

CRN 169811-45-4
CMF C14 H20 O2



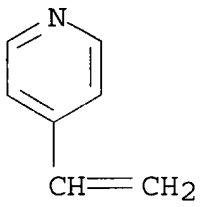
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

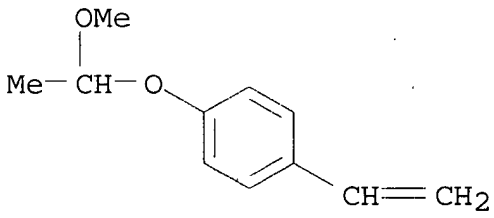
CRN 100-43-6
CMF C7 H7 N



RN 190434-76-5 HCA
CN Phenol, 4-ethenyl-, polymer with ethenylbenzene, 1-ethenyl-4-(1-methoxyethoxy)benzene and 4-ethenylpyridine (9CI) (CA INDEX NAME)

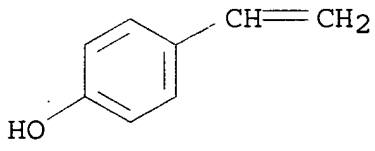
CM 1

CRN 151189-10-5
CMF C11 H14 O2



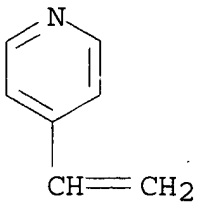
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

CRN 100-43-6
CMF C7 H7 N



CM 4

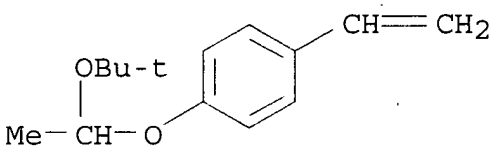
CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

RN 190612-94-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(1,1-dimethylethoxy)ethoxy]-4-ethenylbenzene and 1-[(ethenylphenyl)methyl]-1H-imidazole (9CI) (CA INDEX NAME)

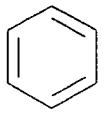
CM 1

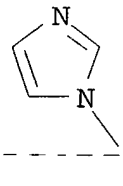
CRN 169811-45-4
CMF C14 H20 O2



CM 2

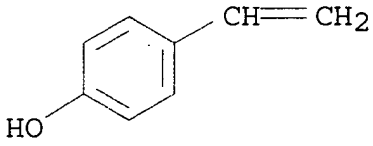
CRN 97427-93-5
CMF C12 H12 N2
CCI IDS





CM 3

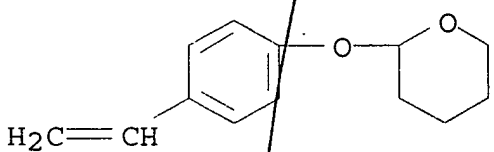
CRN 2628-17-3
CMF C8 H8 O



RN 190612-95-4 HCA
CN Phenol, 4-ethenyl-, polymer with ar-ethenyl-N,N-dimethylbenzenemethanamine and 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

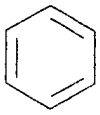
CM 1

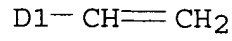
CRN 65409-15-6
CMF C13 H16 O2

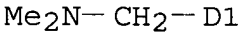


CM 2

CRN 50976-17-5
CMF C11 H15 N
CCI IDS

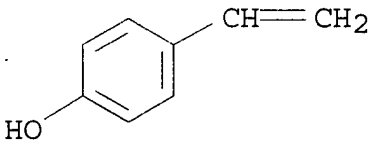






CM 3

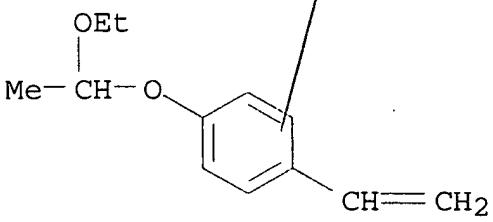
CRN 2628-17-3
CMF C8 H8 O



RN 190677-60-2 HCA
CN Phenol, 4-ethenyl-, polymer with ar-ethenyl-N,N-dimethylbenzenemethanamine and 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

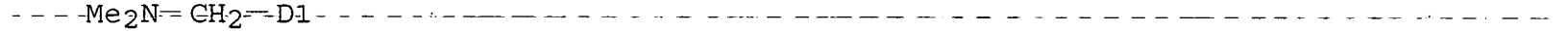
CM 1

CRN 157057-20-0
CMF C12 H16 O2



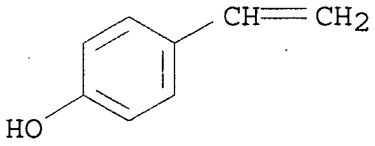
CM 2

CRN 50976-17-5
CMF C11 H15 N
CCI IDS



CM 3

CRN 2628-17-3
CMF C8 H8 O



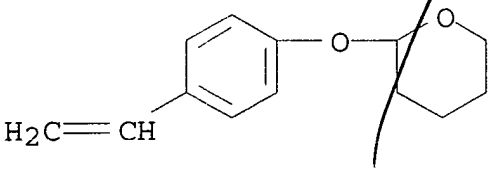
IC ICM G03F007-039
ICS G03F007-00; G03F007-004; G03F007-023; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76
ST pos **photoresist** chem amplified resoln power; basic nitrogen contg resin pos **photoresist**
IT Positive **photoresists**
(alk.-developable pos.-working **photoresist** compn. showing high resoln. power)
IT 926-02-3DP, tert-Butyl vinyl ether, reaction product with **hydrolyzed** vinylpyridine-acetoxystyrene copolymer
5292-43-3DP, tert-Butyl bromoacetate, reaction product with **hydrolyzed** vinylpyridine-acetoxystyrene copolymer
190434-68-5P 190434-69-6P 190434-70-9P
190434-71-0P 190434-73-2P 190434-74-3P **190434-76-5P**
190434-77-6DP, **hydrolyzed**, reaction product with tert-Bu bromoacetate 190434-80-1P **190612-94-3P**
190612-95-4P 190677-60-2P
(alk.-developable pos.-working **photoresist** compn.

showing high resoln. power)
IT 190434-66-3
(alk.-developable pos.-working **photoresist** compn. showing high resoln. power)
IT 66003-76-7, Diphenyliodonium trifluoromethanesulfonate 66003-78-9, Triphenylsulfonium trifluoromethanesulfonate 142096-70-6 176109-33-4 177786-96-8
(photoacid generator; alk.-developable pos.-working **photoresist** compn. showing high resoln. power)

L38 ANSWER 14 OF 15 HCA COPYRIGHT 2003 ACS on STN
126:67524 Positive-working radiation-sensitive resin composition.
Kawabe, Yasumasa; Yamanaka, Tsukasa (Fuji Photo Film Co Ltd, Japan).
Jpn. Kokai Tokkyo Koho JP 08262719 A2 19961011 Heisei, 32 pp.
(Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-66322 19950324.
AB The compn. comprises (A) an alkali-sol. resin, (B) an acid generator, (C) an acid-decomposable dissoln. inhibitor of which the soly. increases by acids, and (D) propylene glycol monoalkyl ether propionate. The compn. comprises (A) a resin with acid decomposable group and of which the soly. in alkali developer increases by acids, (B), and (D). The compn. comprises (A) an alkali-sol. resin, (B) an acid generator (except 1,2-naphthoquinonediazide), and (D). The compn. is nontoxic and shows good coatability, storage stability, high sensitivity and resoln.
IT **125325-82-8P**
(pos.-working radiation-sensitive resin compn. contg. propylene glycol monoalkyl ether propionate as solvent)
RN 125325-82-8 HCA
CN Phenol, 4-ethenyl-, polymer with 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

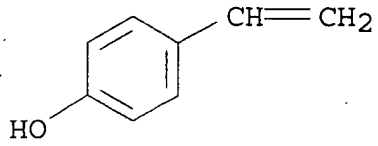
CM 1

CRN 65409-15-6
CMF C13 H16 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-039
ICS G03F007-00; G03F007-004; G03F007-028; G03F007-033; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 37
ST pos working radiation sensitive **resist**; toxic radiation sensitive **resist** compn; propylene glycol alkyl ether propionate **resist**
IT **Resists**
(pos.-working radiation-sensitive; pos.-working radiation-sensitive resin compn. contg. propylene glycol monoalkyl ether propionate as solvent)
IT 95418-60-3P, Poly(p-tert-butoxystyrene)
(**hydrolysis** of)
IT 27029-76-1DP, m-Cresol-p-cresol-formaldehyde copolymer, hydrogenated
27029-76-1P, m-Cresol-p-cresol-formaldehyde copolymer
123589-22-0P, p-tert-Butoxystyrene-p-hydroxystyrene copolymer
125325-82-8P
(pos.-working radiation-sensitive resin compn. contg. propylene glycol monoalkyl ether propionate as solvent)
IT 96839-34-8P, 2,6-Dinitrobenzyl alcohol
(prepn. of acid generator for **resist** compn.)
IT 85-46-1, .alpha.-Naphthalenesulfonyl chloride 87-66-1, Pyrogallol 98-59-9, p-Toluenesulfonyl chloride 124-63-0, Methanesulfonyl chloride 606-31-5, 2,6-Dinitrobenzaldehyde 824-79-3, Sodium p-toluenesulfinate 825-52-5 1569-69-3, Cyclohexylthiol 29256-75-5 67580-39-6, Sodium 9,10-dimethoxyanthracene-2-sulfonate 75007-13-5, Diphenyliodonium perchlorate
(prepn. of acid generator for **resist** compn.)
IT 110-87-2, 3,4-Dihydro-2H-pyran 4466-18-6 5292-43-3, tert-Butyl bromoacetate 24424-99-5, Di-tert-butyl dicarbonate 76937-83-2, .alpha.,.alpha.,.alpha.',.alpha.',.alpha.'',.alpha.''-Hexakis(4-hydroxyphenyl)-1,3,5-triethylbenzene 110726-28-8 153698-47-6
(prepn. of dissoln. inhibitor for **resist** compn.)

L38 ANSWER 15 OF 15 HCA COPYRIGHT 2003 ACS on STN
121:121732 Fine pattern forming material and pattern formation process. Urano, Fumiyoshi; Negishi, Takaaki; Endo, Masayuki; Hashimoto, Kazuhiko; Katsuyama, Akiko (Wake Pure Chemical Industries, Ltd., Japan; Matsushita Electric Industrial Co., Ltd.). Eur. Pat. Appl. EP 588544 A2 19940323, 36 pp. DESIGNATED STATES: R: DE, FR, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1993-307020 19930906. PRIORITY: JP 1992-271014 19920914.
AB A **resist** material comprising (a) a copolymer having as a

functional group -OC(OR4)R2R3 wherein R2 and R3 are, e.g. C1-6 alkyl, and R4 is, e.g. C1-10 alkyl, (b) a compd. which generates an acid when exposed to electron beams, and (c) a solvent, is suitable for forming a chem.-amplified pos.-working fine pattern with high resoln. and good shape.

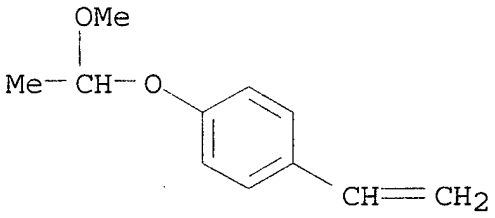
IT **151314-62-4P**, Poly[p-(1-methoxyethoxy)styrene]
157057-21-1P, Poly[p-(1-ethoxyethoxy)styrene]
(prepn. and **hydrolysis** of, for **resist**)

RN 151314-62-4 HCA

CN Benzene, 1-ethenyl-4-(1-methoxyethoxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151189-10-5
CMF C11 H14 O2

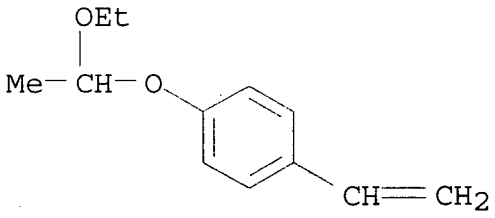


RN 157057-21-1 HCA

CN Benzene, 1-ethenyl-4-(1-ethoxyethoxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 157057-20-0
CMF C12 H16 O2

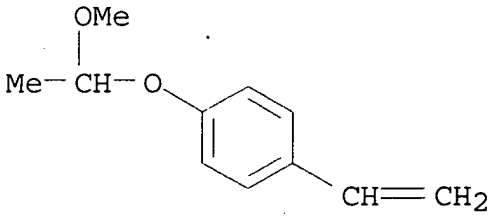


IT **151314-62-4DP**, Poly[p-(1-methoxyethoxy)styrene], **hydrolyzed**, reaction product with methoxypropene and Bu vinyl ether **157057-21-1DP**, Poly[p-(1-ethoxyethoxy)styrene], **hydrolyzed 157057-23-3DP**, p-(1-Ethoxyethoxy)styrene-tert-butyl methacrylate copolymer, **hydrolyzed 157057-23-3P**, p-(1-Ethoxyethoxy)styrene-tert-butyl methacrylate copolymer **158593-28-3P**
(prepn. and use of, in electron-beam **resist**)

RN 151314-62-4 HCA
CN Benzene, 1-ethenyl-4-(1-methoxyethoxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

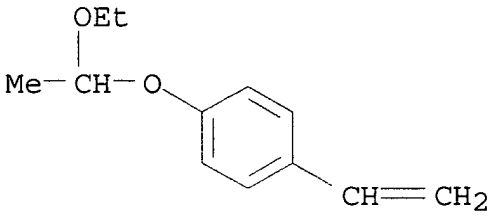
CRN 151189-10-5
CMF C11 H14 O2



RN 157057-21-1 HCA
CN Benzene, 1-ethenyl-4-(1-ethoxyethoxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

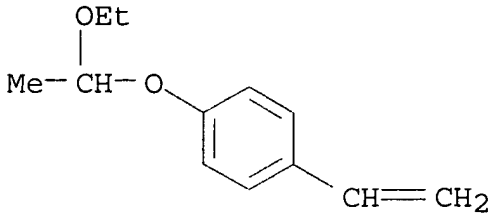
CRN 157057-20-0
CMF C12 H16 O2



RN 157057-23-3 HCA
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

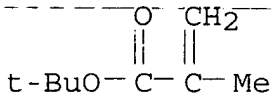
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

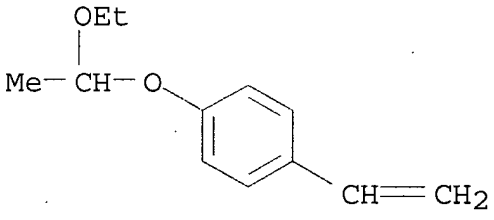
CRN 585-07-9
CMF C8 H14 O2



RN 157057-23-3 HCA
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

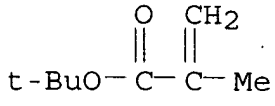
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

CRN 585-07-9
CMF C8 H14 O2

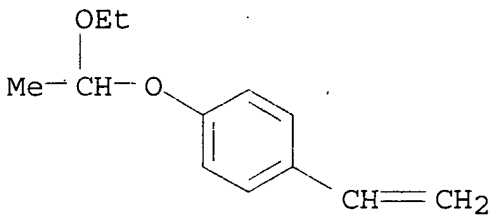


RN 158593-28-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene

(9CI) (CA INDEX NAME)

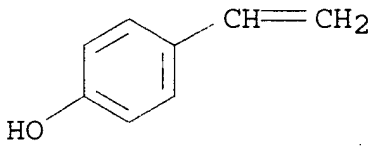
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST **resist** pattern acid generator polymer; electron beam **resist**
IT **Resists**
(electron-beam, acid generator for, styrene polymer as)
IT 95418-60-3P
(prepn. and **hydrolysis** of, for electron-beam **resist**)
IT **151314-62-4P**, Poly[p-(1-methoxyethoxy)styrene] **157057-21-1P**, Poly[p-(1-ethoxyethoxy)styrene]
(prepn. and **hydrolysis** of, for **resist**)
IT 1017-23-8P 92849-60-0P 93045-86-4P 124790-83-6P 157057-29-9P 157057-30-2P
(prepn. and reaction of, **resist** amplifier from)
IT 109-92-2DP, Ethyl vinyl ether, reaction product with **hydrolyzed** substituted styrene polymer 111-34-2DP, n-Butyl vinyl ether, reaction product with **hydrolyzed** poly[p-(1-methoxyethoxy)styrene] 116-11-0DP, 2-Methoxy-1-propene, reaction product with **hydrolyzed** poly[p-(1-methoxyethoxy)styrene] 4941-84-8P, 4,6-Dimethyl-1,2-oxathin-2,2-dioxide 10409-06-0P, Diphenyl disulfone 10409-07-1P, p-Tolyl

disulfone 24979-70-2DP, p-Hydroxystyrene polymer, butoxylated 78190-78-0P 87261-04-9DP, **hydrolyzed** 87261-04-9P 91222-47-8P 95418-60-3DP, **hydrolyzed**, reaction product with Et vinyl ether 124737-99-1P 124738-05-2P 138322-05-1DP, Fumaronitrile-p-t-butoxystyrene copolymer, **hydrolyzed**, reaction product with Et vinyl ether 138322-05-1P, Fumaronitrile-p-t-butoxystyrene copolymer 144982-73-0P, 3-Phenyl-5,6,7,8-tetrahydro-2,1-benzoxathin-1,1-dioxide **151314-62-4DP**, Poly[p-(1-methoxyethoxy)styrene], **hydrolyzed**, reaction product with methoxypropene and Bu vinyl ether **157057-21-1DP**, Poly[p-(1-ethoxyethoxy)styrene], **hydrolyzed 157057-23-3DP**, p-(1-Ethoxyethoxy)styrene-tert-butyl methacrylate copolymer, **hydrolyzed 157057-23-3P**, p-(1-Ethoxyethoxy)styrene-tert-butyl methacrylate copolymer 157057-24-4P 157057-25-5P 157057-26-6P 157057-27-7P 157057-28-8P 157057-31-3P **158593-28-3P**
(prepn. and use of, in electron-beam **resist**)